

**Utah Department of Transportation**



**Supplemental Specifications  
for**

**2005 Standard  
Specifications**

**FOR ROAD AND BRIDGE  
CONSTRUCTION**

**U.S. Standard Units (Inch-Pound Units)**

**Issued December 18, 2006**

# Memorandum

UTAH DEPARTMENT OF TRANSPORTATION

**DATE:** December 18, 2006

**TO:** Holders of Hard Copy of Standard Specifications

**FROM:** Barry Axelrod, CDT  
Standards and Specifications

**SUBJECT:** Supplemental Specifications Distribution, dated December 18, 2006

Applicable files for the change are attached. Maintain these files as a supplemental update to the UDOT Standard Specifications dated January 1, 2005. No pages are to be removed or replaced in the basic book, electronic or hard copy.

If you are in need of electronic copies of any Standard or Supplemental Specification please refer to the Standards and Specifications Web site at <http://www.udot.utah.gov/index.php?m=c&tid=302>. From there select the **2005 Standards** subtopic.

Please note that the 2005 Standards are still in effect. The next version of the Standards is planned for 2008.

If you have any questions or problems with the electronic files contact me at 801-964-4570 or by email at [baxelrod@utah.gov](mailto:baxelrod@utah.gov).

Attachments

## **Listing of Supplemental Specifications**

### **Issue Date: March 14, 2005**

Revised February 24, 2005

Section 01282M Article 1.1 Paragraph D added and Article 1.14 Paragraph E replaced.

Section 01284 New section added

Section 02785M Replaces Table 1 to correct reference callout from AASHTO to ASTM

Section 02843 Entire section revised.

Section 06055M Article 1.2 Paragraph F added and Article 2.2 Paragraphs A and D modified.

### **Issue Date: May 10, 2005**

Revised April 28, 2005

Section 02827 New section added

### **Issue Date: July 12, 2005**

Revised June 30, 2005

Section 02745 Entire section revised.

Section 03412M Article 1.3 revised, Article 1.4 Paragraph E added, Article 1.5 Paragraph C added, and Article 3.7 added.

Section 05120 M Article 1.3 revised, Article 1.4 Paragraph D added, and Article 3.5 added.

### **Issue Date: September 12, 2005**

Revised August 25, 2005

Section 01452M Article 3.1 Paragraph B item 1 replaced.

Section 01571 Entire section replaced.

Section 01574M Article 1.1 replaced, Article 1.3 Paragraph B added, and Article 3.1 Paragraphs F and G added.

Section 01721M Article 1.2 replaced.

Section 02842M Article 1.3 Paragraph C and Article 2.1 Paragraph A replaced.

Section 13551M Article 1.3 replaced, Article 2.1 replaced, Article 3.3 Paragraph C replaced, Article 3.5 Paragraph C replaced, and Article 3.5 Paragraph D added.

Section 13552M Article 1.1 Paragraph A replaced, Article 1.3 replaced, Article 2.2 through Article 2.6 replaced, Article 2.8, Paragraph C added, and Article 3.2 replaced.

Section 13553M Article 1.2 paragraphs I and J replaced, Article 1.3 replaced, Article 2.1 Paragraphs H and I replaced, Article 3.1 Paragraph F replaced, Article 3.1 Paragraph Q3 replaced, Article 3.2 Paragraph A replaced, Article 3.3 Paragraph F replaced, Article 3.4 Paragraph C added, and Article 3.5 Paragraph C added.  
Section 13554M Article 2.2 replaced and Article 3.1 Paragraph N through H replaced.  
Section 13555M Article 1.3 Paragraph E added, Article 2.1 Paragraph A replaced, Article 3.1 Paragraph D deleted, Article 3.2 Paragraphs C, G, and H replaced, Article 3.4 replaced, and Article 3.6 Paragraphs A and B replaced.  
Section 13556 Entire section revised.  
Section 13561M Article 2.1 Paragraph K added, Articles 3.1 Paragraphs E through G replaced, and Article 3.2 Paragraph A replaced.  
Section 13594M Article 2.3 Paragraph A replaced, Article 2.3 Paragraph C replaced, Article 2.4 replaced.

## **Issue Date: November 9, 2005**

Revised October 27, 2005

Section 00725M Article 1.2, paragraph B added, Article 1.4 replaced.  
Section 02745 Entire section originally revised July 12, 2005. This change corrected error in Table 13, Float Test.

## **Issue Date: March 2, 2006**

Revised February 23, 2006

Section 00555M Article 1.6, paragraph A replaced.  
Section 00725M Article 1.2, paragraph B added, Article 1.4 replaced, Article 1.18 Paragraph C1 added, article 1.18 Paragraph D replaced, and Article 1.18 Paragraphs E – I replaced. **(Replaces Supplemental Specification 00725M issued November 9, 2005.)**  
Section 00820M Article 1.2 replaced, Article 1.15 replaced, and Article 1.16 replaced.  
Section 01280M Article 1.3 replaced and Article 1.10 deleted.  
Section 01574M Article 1.1 replaced, Article 1.3 Paragraph B added, Article 1.4, paragraph B1 added, Article 3.1 Paragraphs F and G added, and Article 3.4, paragraph A replaced. **(Replaces Supplemental Specification 01574M issued September 12, 2005.)**  
Section 01721M Article 1.1, Paragraph A replaced, Article 1.2 replaced, Article 1.5, Paragraph F and G replaced, Article 3.3, Paragraph C deleted, and Article 3.11 replaced. **(Replaces Supplemental Specification 01721M issued September 12, 2005.)**  
Section 02317 Entire section revised.  
Section 02748M Article 2.1, Paragraph A replaced, Article 2.2, Paragraph A replaced, and Article 3.2 replaced.

## **Issue Date: May 2, 2006**

Revised April 27, 2006

Section 02633 New section added.

Section 13557 Entire section revised. Title changed.

## **Issue Date: July 11, 2006**

Revised June 29, 2006

Section 01452M Article 1.5, paragraph B replaced, Article 3.1 Paragraph B item 1 replaced, and Table 1 replaced.

Section 01455 Entire section revised.

Section 01561 Deleted by change to Section 01571.

Section 01571 Entire section revised. Deleted Sections 01561 and 01574.

Section 01574 Deleted by change to Section 01571.

Section 02610 Entire section revised.

Section 02645 Entire section revised. Title changed.

Section 02896M Article 3.1, paragraph A replaced, Article 3.3, paragraph C7 added, and Article 3.3, paragraph E replaced.

## **Issue Date: September 11, 2006**

Revised August 31, 2006

Section 02373M Article 1.3, Paragraph C deleted and Article 2.1 replaced.

Section 02613 Entire section revised.

Section 02741M Table 6 replaced.

Section 02785 Entire section revised. Replaced Supplemental Specification 02785M.

Section 02969 Entire section revised.

Section 03311M Table 1 replaced.

Section 03412M Article 3.2, Paragraph E replaced. Previously issued Supplemental Specification incorporated.

## **Issue Date: December 18, 2006**

Revised November 30, 2006

Section 00555 Entire section revised. Replaced Supplemental Specification 00555M.

Section 00570 Entire section revised.

Section 00725 Entire section revised. Replaced Supplemental Specification 00725M.

Section 00727 Entire section revised.

Section 01282 Entire section revised. Replaced Supplemental Specification 01282M.

Section 01284 Replaces previously issued Supplemental Specification that added Section 01284. Article 1.2, Paragraph B modified and Paragraph D deleted.

Section 01561 Section deleted per Supplemental Specification 01571 issued July 11, 2006. Delayed issue, Supplemental for Section 01561 not previously issued.

Section 01574 Section deleted per Supplemental Specification 01571 issued July 11, 2006. Delayed issue, Supplemental for Section 01574 not previously issued.

Section 02056 Entire section revised. Name of section changed and Sections 02061, 02324, and 02330 deleted.

Section 02061 Section deleted per Supplemental Specification 02056.

Section 02324 Section deleted per Supplemental Specification 02056.

Section 02330 Section deleted per Supplemental Specification 02056.

Section 02844 Entire section revised.

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 00555**

**PROSECUTION AND PROGRESS**

**Delete Section 00555 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      RELATED SECTIONS**

- A.      Section 00570: Definitions
- B.      Section 00725: Scope of Work
- C.      Section 00727: Control of Work
- D.      Section 01282: Payment
- E.      Section 01355: Environmental Protection

**1.2      PRECONSTRUCTION CONFERENCE**

- A.      Contact Engineer within 14 calendar days of receiving Notice of Award to schedule preconstruction conference.

**1.3      NOTICE TO PROCEED**

- A.      Proceed with the work after receipt of written notice from the Department.
- B.      Notify the Engineer at least five calendar days before beginning work.

**1.4      SUBLETTING THE CONTRACT**

- A.      Obtain written approval of the Engineer before subletting, selling, transferring, assigning, or disposing any portion of the contract.
- B.      Sublet no more than 70 percent of the total contract bid amount.

- C. Subcontracts, whether committed to in writing or by an informal, unwritten arrangement or transfer of the contract, or any part of it or its obligations, do not relieve liability under the contract and bonds. As part of its contract with the Department, the Contractor accepts liability for any claims for damages or liability resulting from an act or omission of any person who carried out work on its behalf, whether that working relationship is through a subcontract or carried out by an informal, unwritten agreement. The Contractor agrees to indemnify the Department for any damages or liability, including attorney's fees and court costs, which may be incurred by such a person.
- D. Do not allow subcontracted work to begin until the request to sublet work is approved by Engineer.
- E. In computing the percentage of subcontracted work, the Department considers an item as subcontracted in its entirety unless otherwise designated in the subcontract.
  - 1. The Department uses the accumulated percentages of all approved subcontracts to determine that the maximum subcontracted limitation is not exceeded.
  - 2. To determine the amount of work subcontracted, the Department uses the total dollar amount of the items subcontracted in the contract bid proposal, divided by the original contract amount.
  - 3. If the prime Contractor is to perform a portion of an item, the Department determines the amount of work subcontracted by using the dollar amount of the item agreed to between the prime Contractor and the subcontractor, excluding bonds, insurance, profit, and office transaction, etc. performed by the Contractor.
- F. For all subcontracts:
  - 1. Provide for a reduction in retained money equal to the percentage retained in accordance with Section 01282.
  - 2. Include a statement describing the method of distribution of any adjustment due to price increases or decreases using applicable price adjustment specifications for fuel, asphalt, cement, common carrier rates, etc.

## **1.5 ANTICIPATED MONTHLY PAYMENT SCHEDULE**

- A. Prepare the Anticipated Monthly Payment Schedule based on the proposed sequence of activities shown in the baseline construction schedule.
  - 1. Use the form provided by the Engineer.
  - 2. Submit the schedule before the date established for the first partial payment.
  - 3. Include both monthly and semi-monthly payments when expected due to the volume of work on the project.
  - 4. Include all contract months when payments are anticipated.

Prosecution and Progress

00555 – Page 2 of 13

November 30, 2006



5. Include dates of contract start, suspension, completion and milestones that impact payments.
- B. Submit a revised Anticipated Monthly Payment Schedule within 30 calendar days after notification by the Engineer. Revisions are required when:
1. Payments vary more than 10 percent from the submitted schedule and the variance is sustained for 60 calendar days.
  2. Contract start, suspension, completion and milestones dates change.
  3. Change orders are approved increasing or reducing the contract amount sufficient to vary actual payments more than 10 percent from the accepted schedule.

## **1.6 BASELINE CONSTRUCTION SCHEDULE**

- A. Provide the Engineer with a baseline construction schedule meeting the requirements of this section using Primavera 5.0 (or current version) or Primavera Contractor.
1. Accurately reflect the proposed approach to accomplish the work.
  2. Provide a schedule narrative as described in this article.
- B. Use the baseline construction schedule to coordinate all activities on the project, including those with other entities such as subcontractors, vendors and suppliers, utilities, local governments, special service districts, and the Department.
- C. Employ a sufficient workforce, supply adequate materials and equipment, and progress the work with such diligence as to maintain the rate indicated in the accepted baseline construction schedule.
1. All costs to maintain the schedule are solely the Contractor's obligation and at no expense to the Department.
- D. Schedule Submission
1. Submit to the Engineer a baseline construction schedule with schedule narrative within 14 calendar days of the Notice of Award. Submit one hard copy and one electronic copy in a format acceptable to the Engineer.
  2. The Engineer reviews the schedule and returns it, accepted or with comments, within seven calendar days from the date of receipt.
    - a. Address any comments and revise the schedule as necessary to the satisfaction of the Engineer.
  3. Complete the final baseline schedule and obtain Engineer's acceptance within 30 calendar days from the Notice of Award.
    - a. No progress payments are made before the Engineer accepts the baseline construction schedule.

4. The Contractor is solely responsible for planning and executing the work. Engineer's acceptance of the baseline schedule does not:
  - a. Imply approval of any particular construction methods or relieve the Contractor's responsibility to provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the contract,
  - b. Attest to the validity of assumptions, activities, relationships, sequences, resource allocations, or any other aspect of the baseline construction schedule.
5. Failure to include any element of work required by the contract in the accepted baseline construction schedule does not relieve the Contractor's responsibility to perform such work.
6. In no way does the baseline construction schedule modify the contract documents.

E. Schedule Requirements

At a minimum, address the following:

1. Define a complete and logical plan that can realistically be accomplished for executing the work defined in the contract.
2. Include sufficient activities for adequate project planning, including subcontractor, third party, vendor, and supplier activities.
3. Clearly show the critical path using the longest path definition and other critical elements of work.
  - a. Define the critical path of the schedule based on resource limitations if the schedule is resource loaded and leveled.
4. If an early completion schedule is accepted, the Engineer defines the additional Department costs required to support the accelerated schedule, such as increased staff for inspection and testing, overtime, etc.
  - a. Pay for these added costs unless waived by the Engineer on the basis of other benefits accrued to the Department.
5. Clearly define significant interaction points with the Department and other entities such as subcontractors, vendors and suppliers, utilities, local governments, and special service districts.
6. Designate the "Data Date" as the day before the Notice to Proceed.
7. Include a unique identification number for each schedule activity.
8. Clearly and uniquely define each activity description. Using descriptions referring to a percent complete of a multi-element task (i.e., "Construction 50 percent of Deck") is not acceptable.
9. Define the duration of each activity.
  - a. Limit the maximum duration of any activity to 15 days unless otherwise accepted by the Engineer.
10. Clearly identify the relationships tying activities together.
11. Do not have any open-ended activities, except for one start and one finish activity.
12. Do not have any constrained activities unless the Engineer accepts such constraints.

13. Do not sequester project total float through manipulating the calendars, extending activities durations, or any other such methodology.
14. Use resource loading if resource limitations can affect the prosecution of the work.
  - a. No request or claim for contract time extension based on resource shortages will be considered unless the baseline and subsequent schedule updates are resource loaded.
15. Include milestones to define significant contractual events such as Notice to Proceed, substantial completion, and coordination points with outside entities such as utilities, special service districts, etc.
16. Include a well-defined activity coding structure that allows project activities to be sorted by type of work, location of work, work breakdown structure (WBS), or as mutually agreed to by the Contractor and the Engineer.
17. Clearly define calendars.

F. Schedule Narrative Requirements

1. Provide a schedule narrative that describes:
  - a. The construction philosophy supporting the approach to the work outlined in the baseline schedule. Address the reasons for the sequencing of work and describe any limited resources, potential conflicts, and other salient items that may affect the schedule and how they may be resolved.
  - b. The justification for activities with durations exceeding 15 working days.
  - c. The justification for constraints used.
  - d. The justification for unusual calendars used.
  - e. The approach used to apply relationships between activities (for example, all ties are based on physical relationships between work activities - rebar must be placed before concrete is placed; or relationships are used to show limited resources - bridge two follows bridge one because the Contractor only has one bridge crew; etc.).
  - f. The project critical path and challenges that may arise associated with the critical path.
  - g. How the coordination with other entities will be handled.

G. Project Float

Total project float is defined as the cumulative length of time activities can be delayed before they affect the finish date of the project or a contractual milestone.

1. Float is a shared commodity between the Contractor and the Department and not for the exclusive use or financial benefit of either party.
  - a. Either party has the full use of the project float until it is depleted.

## **1.7 CONSTRUCTION SCHEDULE UPDATES**

- A. Update the construction schedule each month during the life of the contract until the closing date for the scheduled progress payment following project final acceptance.
  - 1. The Engineer does not approve progress payment until an acceptable schedule update has been received.
  - 2. Show actual progress for each activity:
    - a. Actual start and finish dates for completed activities
    - b. Actual start dates, percent complete, and remaining duration for activities in progress
    - c. Projected sequences of activities for future work
    - d. Revised relationships and durations for unfinished activities, if warranted
    - e. A well-defined critical path
    - f. Change the data date to one day after the closing date for the monthly progress payment
- B. Submit one hard copy and one electronic copy of the schedule update to the Engineer for review and acceptance.
- C. Along with the updated schedule, submit a narrative describing:
  - 1. Work performed during the estimate period.
  - 2. Problems or delays that have been experienced to date, the party responsible for the problems or delays, and the Contractor's plan to resolve the problems or bring the delayed activities back on schedule.
  - 3. Differences between the work performed and the work planned for the period, including explanations for the deviations.
  - 4. The current critical path of the project, explaining any changes since the last update and the impacts of these changes.
  - 5. Reasons for and impacts resulting from all of the following that apply:
    - a. Added or deleted activities
    - b. Changes in activity durations
    - c. Changes in relationships between activities
    - d. Addition or deletion of constraints
    - e. Changes to project calendars
  - 6. The work to be accomplished during the next period. Provide reasons for deviations from the previous schedule update.
  - 7. Potential problems that may be encountered during the next period and the proposed solutions. Identify all potential problems the Department may be party to and explain what action the Department needs to take and the date by which time the action needs to be taken to avoid the problem.

- D. At the request of the Engineer, participate in a progress meeting to review and discuss the updated schedule information, including any activity delays, remedies, schedule revisions, coordination requirements, change orders, potential delays, and other relevant issues.
  - 1. Make available the project manager, scheduler, and appropriate field personnel to participate in the progress meeting.
  - 2. Make and record an action item list that describes who is responsible for resolving existing or pending issues and the date by which the issue needs to be resolved to avoid contract delays.
  - 3. Submit a revised schedule update if necessary.

## **1.8 LIMITATION OF OPERATIONS**

- A. Minimize interference with traffic during performance of the work.
- B. Do not perform any work without written approval except for repairing or servicing equipment, protecting work, maintaining or curing concrete, and maintaining traffic on Sundays or holidays.
- C. Night work:
  - 1. Provide five calendar day's notice before starting night work.
  - 2. Provide adequate lighting for performing satisfactory inspection and construction operations.
  - 3. Control noise and vibration in accordance with Section 01355.

## **1.9 CHARACTER OF WORKERS**

- A. Provide sufficient resources to complete all work in accordance with the contract and employ workers with the skills and experience necessary to perform the work.
- B. Remove from the project any employee who performs the work in an improper or unskilled manner or who is intemperate or disorderly. Return these employees to the project only with the Engineer's written permission.
- C. The Engineer may suspend work for the Contractor's failure to remove any employee or furnish suitable and sufficient personnel to perform the work.

## **1.10 METHODS AND EQUIPMENT**

- A. Use equipment of the size and mechanical condition to perform and produce the specified work.
- B. Do not damage the roadway, adjacent property, or other highways.

- C. When methods or equipment are specified in the contract, use methods or equipment other than specified only with the Engineer's written permission.
  - 1. Describe in writing the proposed methods and equipment and the reasons for the change.
  - 2. Once approved, produce work that meets project requirements.
  - 3. Discontinue alternate methods or equipment if the Engineer determines that the work does not meet contract requirements.
  - 4. Remove and replace or repair deficient work to meet specified quality at no cost to the Department.
  - 5. The Department does not change the basis of payment or contract time for a change in methods or equipment.

## **1.11 CONTRACT TIME**

- A. Contract time begins 10 calendar days after the date of the Notice to Proceed, unless otherwise specified.
- B. The contract documents define the time allowed to complete the contract. Contract time is measured in either working days or calendar days as defined in Section 00570. When a completion date is specified, the completion date is when the contract is required to be substantially complete.
  - 1. When the contract defines the time allowed to complete the contract in working days or calendar days, the Department excludes the days elapsing between the effective dates of any orders of the Engineer to suspend and resume work that are not the fault of the Contractor.
- C. The Engineer furnishes a Monthly Status of Contract Time showing the number of days expended to date and the number of days remaining for substantial completion.
  - 1. This statement is considered correct unless a written protest documenting the differences is submitted to the Engineer within seven calendar days of receipt.
  - 2. File a written protest with the Engineer within seven calendar days of receiving Monthly Status of Contract Time charges on working day contracts when not in agreement with the time assessed.
    - a. Document asserted discrepancies in the time assessed.
    - b. Failure to file a protest is acceptance of the time assessments.
- D. Refer to Section 00570 for definitions of substantial completion, physical completion, and contract completion.

## **1.12 DETERMINING COMPENSATION AND CONTRACT TIME EXTENSION FOR EXCUSABLE DELAYS**

- A. Request a contract time extension for excusable delays in accordance with this article. Refer to Section 00570.
  - 1. Time may be granted for noncompensable delays that impact the project schedule's critical path. Additional compensation will not be granted.
  - 2. Time and monetary compensation may be granted for compensable delays that impact the project schedule's critical path and the Contractor's costs.
- B. Provide a written request to the Engineer within seven calendar days of the occurrence of an excusable delay detailing the reasons for a time extension and additional compensation, if applicable. The Engineer responds to the written request as described for differing site conditions, changes, and requests or claims for additional compensation as specified in Section 00725.
  - 1. Once a delay-causing event is identified, take all reasonable steps to minimize the impact of the delay. Failure to do so may result in the rejection of all or part of the delay claim.
  - 2. Costs incurred before notification of delay are not allowed.
  - 3. Provide the Engineer with a schedule impact analysis showing the impact of the delay-causing event on the project schedule.
  - 4. Maintain daily records of all labor and material costs, station locations, and equipment expenses for all operations affected.
    - a. Obtain Engineer's concurrence with these records on a daily basis.
  - 5. Prepare and submit to the Engineer weekly written reports that contain:
    - a. Number of days of delay.
    - b. Summary of all delayed operations or those that will be delayed and the cause for delay.
    - c. Itemize all extra costs incurred:
      - 1) Document how the extra costs relate to the delay and how they are calculated and measured.
      - 2) Identify all affected project employees for whom costs are being compiled.
      - 3) Summarize equipment time charges and identify equipment by manufacturer's number.
      - 4) Provide certification of all costs.
  - 6. Meet with the Engineer weekly to compare the previous week's daily records with those maintained by the Department.
    - a. Resolve any disagreement over weekly delay costs with the Engineer.
    - b. Provide written notice within 10 calendar days documenting the disagreement between Department and Contractor calculations of weekly delay costs.
    - c. Failure to provide written notification is interpreted as acceptance that Department records are accurate.

- C. Contract adjustment is made as written modification to the contract through change order, when warranted, unless the Contractor does not notify the Engineer in accordance with this article.
  - 1. Time will be added to the contract based on the overall extension of the critical path of the project schedule attributed to the delay-causing event.
- D. Delay compensation for excusable delays is made in accordance with Section 01282.
- E. If the Engineer decides a contract adjustment identified by the Contractor is unnecessary, and the Contractor does not agree with the Engineer's decision, the Contractor may pursue a claim for additional compensation or contract adjustment as specified in Section 00727.

### **1.13 FAILURE TO COMPLETE ON TIME**

- A. Achieve substantial completion within the specified contract time. The Department deducts from any money due the sum specified in the following Schedule of Liquidated Damages (Table 1) for each calendar day or working day that any work remains necessary for substantial completion after the specified contract time, including any approved extensions.
- B. Achieve physical completion no later than 30 calendar days after substantial completion. The Department deducts \$210 per day from any money due for each calendar day beyond 30 calendar days following substantial completion for any work necessary for physical completion. Refer to Sections 00570 and 00727.
- C. Achieve contract completion no later than 30 calendar days after notification of physical completion/final acceptance. The Department deducts \$100 per day from any money due for each calendar day beyond 30 calendar days following notification of final acceptance that any Contractor obligation under the contract remains unfulfilled. Refer to Sections 00570 and 00727.

**Table 1 - Schedule of Liquidated Damages**

<b>Original Contract Amount</b>		<b>Daily Charge</b>	
<b>From more than</b>	<b>To and including</b>	<b>Calendar Day Completion Date</b>	<b>Work Day</b>
\$0	\$100,000	\$210	\$830
100,000	500,000	450	950
500,000	1,000,000	680	1380
1,000,000	5,000,000	1270	2170
5,000,000	10,000,000	1860	2950
10,000,000	30,000,000	2770	4930
30,000,000		4100	8240



- D. Continuing and completing the work after the contract time expires does not waive the Department's rights under the contract.

#### **1.14 CONTRACT TERMINATION FOR DEFAULT**

- A. The Department may declare the Contractor to be in default and terminate the contract if the Contractor:
  - 1. Does not begin the work under the contract within the time specified.
  - 2. Does not perform the work with sufficient resources to assure the prompt completion of the work.
  - 3. Does not meet contract work requirements or neglects or refuses to remove and replace rejected materials or unacceptable work.
  - 4. Stops work.
  - 5. Does not resume stopped work within the time specified upon notification from the Department.
  - 6. Becomes insolvent or is bankrupt or commits related acts.
  - 7. Is nonresponsive to final third-party judgments.
  - 8. Makes an assignment for the benefit of creditors without the Department's approval.
  - 9. Does not comply with contract requirements including minimum wage payments or EEO contract requirements.
  - 10. Is a party to fraud.
- B. The Engineer may declare the Contractor in default by written notice to the Contractor and the Surety advising them of the actions required for remedy.
- C. Comply with the written notice within 10 calendar days of receipt or the Department has full power and authority to terminate the contract.
- D. The Department may appropriate or use any or all materials at the project site and enter into another contract for completion of the work according to the terms and provisions thereof or use such methods as determined by the Department to complete the contract.
- E. All costs and charges incurred by the Department, including the cost of completing the work under the contract, are deducted from money owed or that may be owed the Contractor. The Contractor and Surety are liable and must pay the Department for the difference if the expense exceeds the sum that would have been payable under the contract.
- F. If it is determined after termination of the Contractor's right to proceed, that the Contractor was not in default or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for public convenience.

## **1.15 CONTRACT TERMINATION FOR PUBLIC CONVENIENCE**

- A. The Department may by written order terminate the contract or any portion thereof after determining that for reasons beyond the Contractor's or the Department's control, the Contractor is prevented from proceeding with or completing the work and that termination is in the public interest.
  - 1. Specifics on the termination and the effective date will be detailed in a Notice of Termination.
- B. Reasons for termination may include, but are not limited to:
  - 1. Executive Orders of the President or State Governor.
  - 2. National emergency that creates a serious shortage of materials.
  - 3. Orders from duly constituted authorities relating to energy conservation.
  - 4. Restraining Orders or Injunctions obtained by third-party citizen action resulting from national or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.
  - 5. Court restraining orders based on acts or omissions of persons or agencies other than the Contractor.
  - 6. Conditions determined to be in the best interest of the Department.
- C. Upon receipt of Notice of Termination, immediately:
  - 1. Stop work as specified.
  - 2. Place no further subcontracts or order materials, services, or facilities except as approved to complete any remaining portion of the contract.
  - 3. Terminate all subcontracts to the extent they relate to terminated work.
  - 4. Settle all outstanding liabilities and termination settlement proposals.
  - 5. Transfer title and deliver to the Department:
    - a. Unfabricated or partially fabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated,
    - b. Completed or partially completed plans, drawings, information, and other property required to be furnished to the Department if the contract had been completed.
  - 6. Complete work not terminated.
  - 7. Coordinate a time and date with the Engineer to inventory materials obtained but not yet used for the project.
  - 8. Take all necessary or directed actions to protect contract-related property that is in the possession of the Contractor and in which the Department has or may have an interest.

- D. When the Department orders termination of a contract effective on a certain date, the Department pays for all completed items of work as of that date at the contract bid price.
1. The Department pays for partially completed work either at agreed prices or by force account methods.
  2. The Department pays for items that are eliminated in their entirety in accordance with Section 01282.
- E. Materials obtained by the Contractor that have not been incorporated into the project may be:
1. Purchased from the Contractor at the option of the Department at actual cost delivered to a prescribed location.
  2. Disposed of as mutually agreed.
- F. Contractor may submit a claim for additional costs not covered in the contract after receipt of Notice of Termination from the Department.
1. Submit within 60 calendar days of the effective termination date.
  2. Include cost items such as:
    - a. Reasonable idle equipment time
    - b. Mobilization efforts
    - c. Bidding and project investigative costs
    - d. Overhead expenses attributable to the project terminated
    - e. Reasonable profit on work completed
    - f. Subcontractor costs not otherwise paid for
    - g. Actual idle labor cost if work is stopped before termination date
    - h. Guaranteed payments for private land usage as part of original contract
    - i. Any other direct cost the Contractor has incurred
  3. The negotiated settlement figure reached with the Contractor does not include loss of anticipated profits.
- G. Make cost records available to the Department for determining the validity and amount of each item claimed and for providing a basis for negotiating an equitable settlement.
- H. Termination of a contract or portion thereof does not relieve the Contractor of contractual responsibilities for the work completed or relieve the Surety of its obligation for and concerning any just claim arising out of the work performed.

**PART 2      PRODUCTS      Not used**

**PART 3      EXECUTION      Not used**

END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 00570**

**DEFINITIONS**

**Delete Section 00570 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      RELATED SECTIONS**

- A.      Section 00725: Scope of Work
- B.      Section 01280: Payment

**1.2      REFERENCES**

- A.      Code of Federal Regulations

**1.3      ACRONYMS AND ABBREVIATIONS**

- A.      Interpret acronyms and abbreviations used in the Contract as follows:
  - 1.      AAR              Association of American Railroads
  - 2.      AASHTO          American Association of State Highway and Transportation Officials
  - 3.      ACI                American Concrete Institute
  - 4.      AGC                Associated General Contractors
  - 5.      AI                  Asphalt Institute
  - 6.      AIA                American Institute of Architects
  - 7.      AISC               American Institute of Steel Construction
  - 8.      AISI                American Iron and Steel Institute
  - 9.      AMRL              AASHTO Materials Reference Laboratory
  - 10.   ANLA              American Nursery and Landscape Association
  - 11.   ANSI               American National Standards Institute
  - 12.   API                American Petroleum Institute
  - 13.   APL                Accepted Products Listing
  - 14.   AREMA            American Railway Engineering and Maintenance-of-Way Association
  - 15.   ASCE              American Society of Civil Engineers
  - 16.   ASLA              American Society of Landscape Architects
  - 17.   ASTM              American Society for Testing and Materials

18.	ATMS	Advanced Traffic Management System
19.	AWPA	American Wood Preservers' Association
20.	AWWA	American Water Works Association
21.	AWS	American Welding Society
22.	CFR	Code of Federal Regulations
23.	CSI	Construction Specification Institute
24.	EBS	UDOT's Electronic Bid System
25.	EUSERC	Electric Utility Service Equipment Requirements Committee
26.	FHWA	Federal Highway Administration
27.	FSS	Federal Specifications and Standards
28.	GSA	General Services Administration
29.	IMSA	International Municipal Signal Association
30.	ISO	International Organization for Standardization
31.	ITE	Institute of Traffic Engineers
32.	MIL	Military Specifications
33.	MUTCD	Manual on Uniform Traffic Control Devices
34.	NEMA	National Electrical Manufacturers Association
35.	OSHA	Occupational Safety and Health Administration
36.	PCA	Portland Cement Association
37.	PDPL	Performance Data Products Listing
38.	PTI	Post-Tensioning Institute
39.	SAE	Society of Automotive Engineers
40.	SSPC	The Society for Protective Coatings
41.	SWPPP	Storm Water Pollution Prevention Plan
42.	UDOT	Utah Department of Transportation
43.	UL	Underwriters Laboratory
44.	UPDES	Utah Pollution Discharge Elimination System
45.	USC	United States Code
46.	WWPA	Western Wood Products Association

## 1.4 TERMS

- A. Interpret terms used in the Contract as follows:
1. **Act of God:** Any cataclysmic phenomenon of nature beyond the Department and Contractor's control. Weather is not considered an act of God unless it can be shown conclusively that such weather could not have been anticipated as a normal hazard of the contract.
  2. **Actual Cost:** Contractor's actual cost to provide labor, material, equipment owned or invoiced rental, and administrative overhead necessary for the work. Excludes profit.
  3. **Addendum:** Contract revision developed between advertising and opening bids.
  4. **Advertisement:** The public announcement requesting bids for specified work or materials.
  5. **Award:** The Department's acceptance of a bid or proposal.

6. **Backfill:** Material used to replace, or the act of replacing material removed during construction.
7. **Bid:** Bid proposal. A bidder's written offer or proposal on Department furnished forms to perform stated work at the quoted prices.
8. **Bid Documentation:** All writings, working papers, computer printouts, charts, and data compilations containing or reflecting a bidder's information, data, or calculations used to determine the bid proposal. Bid documentation includes material used to decide and apply:
  - Equipment rates
  - Overhead rates
  - Labor rates
  - Efficiency or productivity factors
  - Arithmetic extensions
  - Subcontractor and material supplier quotationsReference all manuals used to determine the bid proposal, including name, date, and publisher. Bid documentation excludes any Department documents provided to the bidder used to prepare the bid proposal.
9. **Bid Documentation Escrow:** Preserving successful bid documentation to be used in the event of a claim or litigation between the bidder and the Department.
10. **Bidder:** An individual or legal entity submitting a bid or response to a Department request for proposals.
11. **Bid Guaranty:** The security furnished with a bid to assure that the bidder will enter into the contract if the bid is accepted.
12. **Bridge:** A structure, including supports, erected over a depression or an obstruction such as water, highway, or railway, and having:
  - a. A track or passageway for carrying traffic or other moving loads or utilities
  - b. A length measured along the center of roadway of more than 20 ft between undercopings of abutments or extreme ends of openings for multiple boxes.
13. **Bridge Length:** The over-all length of a bridge measured along the line of survey stationing back to back of the backwalls of abutments, if present, otherwise end to end of the bridge floor. In no case is the bridge length less than the total clear opening of the structure.
  - a. **Bridge Roadway Width:** The clear width measured at right angles to the longitudinal centerline of the bridge between the bottom of curbs or in the case of multiple height of curbs, between the bottoms of the lower risers or if curbs are not used, between inner faces of parapet or railing.
14. **Certification:** A written document or affidavit officially declaring confirmation of a statement or information as being true, accurate, or genuine.
15. **Calendar Day:** Every day shown on the calendar, beginning and ending at midnight.

16. **Certificate of Compliance:** A certification, including a signature by a person having legal authority to act for the manufacturer, stating that the product or assembly to be incorporated into the project was fabricated in accordance with and meets the applicable specifications.
17. **Certified Test Report:** A test report from the manufacturer or an independent testing laboratory, including a signature by a person having legal authority to act for the manufacturer or the independent testing laboratory stating that the test results show the product or assembly to be incorporated into the project has been sampled and tested and the samples have passed all specified tests.
18. **Change Order:** A written order to the Contractor detailing changes to the specified work quantities, extra work, or modification to the original contract which establishes the basis of payment and time adjustments for the affected changes.
19. **Claims Review Board:** A board established by UDOT policy to hear and review Contractor claims not settled or resolved at the Department's District or Region level. The board makes recommendations to the Department's Deputy Director for settlement.
20. **Commercial Materials Source:** A commercial materials source site or materials plant that sells to the general public before the Department's advertisement of the contract, whose continuance in operation is determined wholly without regard to a particular Federal or Federally assisted contract, and possesses the required retail sales tax license and business license in its residential State.
21. **Commission:** The Utah Transportation Commission.
22. **Completion Date:** The date when the contract work is specified to be substantially complete.
23. **Concrete - Small Structure:** Eight cubic yards or less of concrete.
24. **Conformity:** Conformance. Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified. Where working tolerances are specified, conformity means compliance with such tolerances.
25. **Construction Limits:** Area of established boundaries within the highway right-of-way or construction easements that defines the construction area.
26. **Contract:** Written agreement between the Department and the Contractor establishing the obligations of the parties for the performance of the work prescribed. The contract includes the following, all of which constitute one instrument:
  - a. Invitation for bids
  - b. Bid proposal
  - c. Contract bond
  - d. Specifications
  - e. Special provisions
  - f. General and detailed plans
  - g. Notice of award
  - h. Notice to proceed

- i. Authorized contract time extensions
  - j. Any change orders and agreements required to complete the work in an acceptable manner
27. **Contract Amount (Price component):** The summation of the products of the quantities shown in the bid schedule multiplied by the unit bid prices for the items in the Contractor's bid, but not including Time.
28. **Contract Bid Item:** A specific unit of work for which a price is provided in the contract. For projects that include Price + Time (P+T) bidding, Time is a bid item.
29. **Contract Bonds:** The approved form of security, executed by the Contractor and the Contractor's surety or sureties, guaranteeing complete execution of the contract, including change orders, and the payment of all legal debts pertaining to the construction of the project.
- a. **Contract Payment Bond:** The security executed by the Contractor and furnished to the Department to guarantee payment of all Contractor legal debts pertaining to the construction of the contract.
  - b. **Contract Performance Bond:** The security executed by the Contractor and furnished to the Department to guarantee completion of the work under the contract.
30. **Contract Completion:** The day, determined by the Engineer, when all work specified in the contract is completed and all obligations of the Contractor under the contract are fulfilled. Furnish all documentation required by the contract and required by law before this date.
31. **Contract Pay Item:** A specific unit of work for which a price is provided in the contract and paid, subject to contract provisions, to the Contractor for the accepted quantities. Exceptions include, but are not limited to, the items Time, and Lane Rental, which are not pay items. No payment will be made for the bid items titled Time and Lane Rental.
32. **Contract Time:** The date, or number of working days or calendar days allowed for substantial completion of the contract, including authorized time extensions. When a completion date is specified, reach substantial completion on or before that date, even when that date is a Saturday, Sunday or holiday.
33. **Contractor:** The individual or legal entity contracting with the Department for performance of prescribed work.
34. **Contractor Affiliate:** Any person associated with the Contractor in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or other like position.
35. **County:** The County where the contracted work is located.
36. **Culvert:** Any structure that provides an opening under the roadway not meeting the classification of a bridge as defined in this section.
37. **Debarment:** Action taken by the Department or federal government pursuant to regulations that prohibits a person or company from performing work on a public project.



38. **Delay:** Any event, action, or factor causing work to extend beyond the specified contract time.
- a. **Excusable Delay:** A delay beyond the Contractor's control and not caused by the Contractor's fault or negligence and for which a time extension may be granted.
- 1) **Compensable Delay:** An excusable delay caused by Department action or inaction, or under the Department's control, including delays resulting from change orders, differing site conditions, work suspensions caused by conditions beyond the control of the Contractor, lack of site access, and delayed shop drawing approval. For such delays, the Department may grant additional time and compensation.
- 2) **Noncompensable Delay:** An unforeseen and unanticipated excusable delay caused by acts of God, acts of public enemies, fires, floods, epidemics, quarantine restrictions, area wide strikes, freight embargoes, unusually severe weather, or delays not caused by the Contractor's or the Department's fault or negligence. For such delays, additional compensation will not be granted.
- a) **Concurrent Delay:** A noncompensable delay that occurs when both the Contractor and the Department independently delay work on critical path activities during approximately the same time period.
- b. **Nonexcusable Delay:** A delay that was within the Contractor's control, was the fault or responsibility of the Contractor, or could have reasonably been foreseen by the Contractor and for which there is no monetary compensation or time extension. Examples of such delay-causing events are normal weather or the failure by the Contractor to assign sufficient resources to the work.
39. **Department:** The Utah Department of Transportation
40. **Differing Site Conditions:** Subsurface or latent physical conditions at the project site that:
- a. Differ significantly from those indicated in the contract, or
- b. Present unknown physical conditions of an unusual nature that differ materially from those normally encountered and generally recognized as inherent in the nature of the required work.
41. **Electronic Communication:** A communication transmitted through facsimile (fax), e-mail, or other electronic means where a hard copy can be produced.

42. **Engineer:** The UDOT Deputy Director, acting directly or through a duly authorized representative, usually the Resident Engineer or Consultant Engineer, responsible for engineering and administrative of the contract. A Consultant Engineer hired by the Department for construction project management is considered an extension of the Department and has the same responsibility and authority as a Resident Engineer.
43. **Equipment:** All machinery, tools, apparatus, and the fuels, lubricants, batteries, and other supplies and parts needed to use, operate, and maintain these items for use in constructing and completing the work.
44. **Extra Work:** Work not provided for in the contract, but found by the Engineer to be essential for the satisfactory completion of the contract within its intended scope.
45. **Final Acceptance:** The date when the Engineer determines that all requirements of physical completion, as defined in this section, are satisfactorily completed.
46. **Force Account:** A method of payment for work performed by the Contractor at the Engineer's direction, calculated as specified in Section 01282.
47. **Geotextile:** Any permeable knitted, woven, or nonwoven textile material used with foundation, soil, rock, earth, or any other geotechnical engineering related material, as an integral part of a man-made project, structure, or system.
48. **Highway, Street, or Road:** A general term denoting a public way used by vehicles and pedestrians, including the entire area within the right-of-way.
49. **Holidays:**
- |                        |                  |
|------------------------|------------------|
| New Year's Day         | Labor Day        |
| Martin Luther King Day | Columbus Day     |
| Presidents' Day        | Veteran's Day    |
| Memorial Day           | Thanksgiving Day |
| Independence Day       | Christmas Day    |
| Pioneer Day            |                  |
- When the Holiday falls on a Saturday, Friday will be the Holiday. When the Holiday falls on Sunday, Monday will be the Holiday.
50. **Inspector:** The Engineer's authorized representative assigned to inspect work and materials.
51. **Interpretations:** Unless otherwise stated in the contract, all direction, approvals, permissions or acceptance is by the Engineer.
52. **Invitation for Bids:** The advertisement requesting bids for work or materials. It estimates quantities, specifies the location of the work, character and quantity of the materials to be furnished and the time and place of the opening of bids.
53. **Laboratory:** The Department's testing laboratory or any other testing laboratory designated by the Engineer.

- 54. **Lane Rental:** A method to assess the Contractor rental fees for each lane, shoulder, or combination of lanes and shoulders taken out of service.
- 55. **Liquidated Damages:** A predetermined sum assessed the Contractor. This sum is not considered a penalty, but as liquidated damages due the Department by reason of inconvenience to the public, added cost of engineering and supervision, and other items for extra expenditures of public funds for the Contractor's failure to perform as specified.
- 56. **Major Contract Item:** Any individual bid item, or item added by change order, having a contract value in excess of five percent of the original contract amount.
- 57. **Materials:** Substances specified for use in project construction.
- 58. **Notice to Proceed:** Written notice to the Contractor to begin the contract.
- 59. **Overburden:** Any material that overlays material designated for road or bridge construction.
- 60. **Pavement Structure:** The combination of subbase, base course, and surface course placed on a subgrade to support and distribute the traffic load to the roadbed.
  - a. **Surface Course:** One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called the "Wearing Course."
  - b. **Base Course:** One or more layers of specified material and thickness placed on a subbase or a subgrade to support a surface course.
  - c. **Subbase:** One or more layers of specified material thickness placed on a subgrade to support a base course.
  - d. **Subgrade:** The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed.
  - e. **Subgrade Treatment:** Stabilization of roadbed material.
- 61. **Physical Completion:** Physically complete. The day when all construction work required by, or incidental to, the contract is satisfactorily completed, including all punch list work, final cleanup, and demobilization; the date determined by the Engineer when final acceptance is established and the Contractor's only outstanding obligation under the contract is submitting or processing documentation.
- 62. **Plan Quantity:** An estimated quantity for a portion of the work designated as the pay quantity for the contract. Refer to Section 01280.
- 63. **Plans:** Approved contract drawings showing the location, type, dimensions, and details of the specified work.
  - a. **Standard Drawings:** Detailed drawings approved for repetitive use.
  - b. **Working Drawings:** Supplemental design sheets or similar data that the Contractor is required to submit to the Engineer such as shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, and bending diagrams for reinforcing steel.

- 64. **Prequalification/Initial Financial Screening Statement:** The specific forms on which required information is furnished about the Contractor's ability to perform and finance the work.
- 65. **Price + Time Bidding (P+T):** A price-plus-time bidding procedure.
- 66. **Profile Grade:** The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of such trace according to the context.
- 67. **Project:** The specific section of the highway or other specific property on which construction is to be performed together with all improvements to be constructed under the contract.
- 68. **Proposal:** A bidder's written response to a Department request for proposals. See also Value Engineering Change Proposal.
- 69. **Responsible Bidder:** A bidder able to perform the specified work as determined by the Department.
- 70. **Responsive Bid:** A bid that meets all requirements of the invitation for bids.
- 71. **Resources:** The labor, equipment, materials, and incidentals necessary to perform work on a contract bid item or other element of work.
- 72. **Right-of-Way:** A general term denoting land, property, or interest acquired for or devoted to transportation purposes.
- 73. **Roadbed:** The graded portion of highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.
- 74. **Roadbed Material:** Material in cuts, embankments, and embankment foundations from the subgrade down that supports the pavement structure.
- 75. **Roadside:** The areas between the outside edges of the shoulders and the right-of-way boundaries including unpaved median areas between inside shoulders of divided highways and areas within interchanges.
- 76. **Roadside Development:** Items necessary for the preservation or replacement of landscape materials. Features may include suitable plantings and other improvements or ground cover to preserve and enhance the appearance and stability of the highway right-of-way or acquired easements for scenic improvements.
- 77. **Roadway:** The portion of a highway within the construction limits.
- 78. **Shoulder:** The portion of the roadway adjacent to the traveled way where vehicles may stop for emergencies and which supports base and/or surface courses.
- 79. **Sidewalk:** That portion of the roadway constructed exclusively for pedestrian use.
- 80. **Significant Change in Character of Work:** Work that differs materially in kind or nature from that involved or included in the original contract or results in the total quantity of a major contract item, as defined in this section, varying from the original contract quantity by more than 25 percent.
- 81. **Site of Work:** As defined in Title 29 CFR Part 5.2 (1).

82. **Specifications:** The compilation of provisions and requirements for the performance of prescribed work.
- a. **Special Provisions:** A unique specification or a modification or revision to the standard specifications applicable to an individual contract.
  - b. **Supplemental Specifications:** Approved additions and revisions to the Standard Specifications.
  - c. **Standard Specifications:** Specifications approved for general application and repetitive use.
83. **Specifications Format:** See the Specification Writer's Guide. Refer to: <http://www.udot.utah.gov/index.php/m=c/tid=719>  
The titles or headings of the sections, parts, articles, paragraphs, and sub-paragraphs in Standard Specifications and Special Provisions are intended for convenience of reference and have no bearing on their interpretation.
84. **Stabilization:** Modification of soils or aggregates by incorporating materials that increases load-bearing capacity, firmness, and resistance to weathering or displacement.
85. **State:** The State of Utah acting through its authorized representative.
86. **Structures:** Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other such features that may be encountered in the work.
87. **Subcontractor:** An individual or legal entity to which a Contractor sublets part of the work.
88. **Substantial Completion:** Substantially complete. The day, determined by the Engineer, when all of the following have occurred:
- a. The public, including vehicles and pedestrians, has full and unrestricted use and benefit of the facilities both from the operational and safety standpoint.
  - b. All safety features are installed and fully functional, including, but not limited to, illumination, signing, striping, barrier, guardrail, impact attenuators, delineators, and all other safety appurtenances.
  - c. Only minor incidental work, replacement of temporary substitute facilities or correction or repair remains for physical completion.
  - d. The Contractor and Engineer mutually agree that all work remaining will be performed without lane closures, trail/sidewalk closures, or further delays, disruption, or impediment to the public.
89. **Substructure:** All of the structure below the girders or main load carrying members of simple and continuous span bridges, including abutments, bent caps, columns, bents, footings, wingwalls, and skewbacks of arches.
90. **Superintendent:** The Contractor's authorized employee in responsible charge of the work.
91. **Superstructure:** All of the structure except the substructure as defined in this section.

92. **Surety:** The legal entity or individual, other than the Contractor, executing a bond furnished by the Contractor.
93. **Time Related Cost (Time component):** A lump sum bid item titled "Time" for which there is no pay. The sum of the products of the daily time-related cost rates multiplied by the number of days estimated by the Contractor to achieve the milestones specified.
94. **Town, City, or District:** A subdivision of the county used to designate or identify the location of the contract.
95. **Traveled Way:** The portion of the roadway designated for the movement of vehicles, excluding shoulders and auxiliary lanes.
96. **Unbalanced Bid:**
- a. **Mathematically Unbalanced:** A bid containing lump sum or unit bid items that do not include reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs.
  - b. **Materially Unbalanced:** A mathematically unbalanced bid that generates a reasonable doubt that awarding the contract to the bidder will result in the lowest ultimate cost to the Department.
97. **Unrestricted Traffic:** No traffic control measures in use that obstruct, delay, or in any way impede traffic flow, other than those specifically permitted in the contract.
98. **Utility:** All privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, power, heat, gas, oil, water, waste, storm water not connected with the highway drainage, signal systems, and other products that directly or indirectly serve the public. The utility company.
99. **Value Engineering Change Proposal:** A change proposed by the Contractor and considered by the Department intended to result in a cost savings to the project without reducing the essential functions and characteristics of the project. Refer to Section 00725.
100. **Work:** All labor, materials, equipment, documents, elements, activities, and incidentals necessary to complete the contract, including all alterations, amendments, or extensions made by change order or other written orders of the Engineer.
101. **Working Day:** Any calendar day, except:
- a. Saturdays, Sundays, and contract-designated holidays.
  - b. Days between December 1 and February 29, inclusive.
  - c. Days when the Contractor is specifically required by the contract or letter from the Engineer to suspend operations through no fault of the Contractor.
  - d. Days when the Engineer determines that inclement weather or adverse conditions interfere with the progress of the work.
    - 1) When the Engineer determines that inclement weather prevents the Contractor from working with at least 75 percent of the normal labor and equipment force engaged in the work for at least 60 percent of the normal working day.

- 2) When inclement weather stops the Contractor from beginning work at the normal starting hour and the crew is released as a result, it is not considered a working day even though conditions may improve and the major portion of the day could be considered suitable for operations.
- 102. **Working Drawings:** See “Plans.”
- 103. **Written Permission of the Engineer:** A letter signed by the Engineer granting specific permission and outlining limitations of the permission.

<b>PART 2</b>	<b>PRODUCTS</b>	<b>Not used</b>
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<b>PART 3</b>	<b>EXECUTION</b>	<b>Not used</b>
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END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 00725**

**SCOPE OF WORK**

**Delete Section 00725 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      RELATED SECTIONS**

- A.      Section 00555: Prosecution and Progress
- B.      Section 00570: Definitions
- C.      Section 00727: Control of Work
- D.      Section 01282: Payment
- E.      Section 01355: Environmental Protection
- F.      Section 01554: Traffic Control
- G.      Section 01741: Final Cleanup

**1.2      REFERENCES**

- A.      UDOT and Utah AGC Partnering Field Guide

**1.3      CONTRACT INTENT**

- A.      The contract states the roles and obligations of the Department and Contractor regarding the construction, execution, and completion of work.
  - 1.      Furnish all resources and incidentals required to complete the specified work.



## **1.4 PARTNERING**

- A. The Department encourages partnership between the Department, the Contractor, and the subcontractors. This partnership uses the strengths of each organization to identify and achieve mutual goals.
- B. Implement partnering in accordance with the UDOT and Utah AGC Partnering Field Guide. Refer to <http://www.udot.utah.gov/index.php/m=c/tid=719>.
  - 1. Decide with the Engineer whether to use an independent third party firm to implement facilitated partnering or to share in facilitation.
    - a. Contact the Engineer within 30 days of Notice of Award and before the preconstruction conference to implement a third party facilitated partnering initiative.
  - 2. The Contractor and Engineer select a facilitator for the meeting and develop attendees list, agenda, duration, and location of a partnering workshop.
- C. Share any costs equally with the Department to accomplish partnering.
- D. Follow-up workshops may be held as agreed by the Contractor and the Engineer.

## **1.5 DIFFERING SITE CONDITIONS, CHANGES, AND REQUESTS OR CLAIMS FOR ADDITIONAL COMPENSATION**

- A. Immediately notify the Engineer verbally of alleged changes to the contract due to differing site conditions, extra work, altered work beyond the scope of the contract, actions taken by the Department that change the contract terms and conditions, or upon discovering any other unforeseen condition or event that may result in a request or claim for additional compensation or time.
  - 1. Refer to Section 00555 for determining compensation and contract time extension for excusable delays.
  - 2. When encountering differing site conditions on the project, leave the site undisturbed and suspend work unless directed otherwise.
  - 3. Obtain written authorization from the Engineer to perform affected work and incur contract item expense after discovering the change, condition, or event.
- B. Notification Requirements:
  - 1. Provide the following information in writing within seven calendar days of when the change, condition, or event resulting in the request or claim for additional compensation is discovered.
    - a. Date, nature, and circumstances causing the change, condition, or event.

- b. Name, title, and activity of each Department representative aware of the change, condition, or event.
    - c. Identify documents and the substance of discussions about the change, condition, or event.
    - d. Basis for a claim that the work is not required by the contract.
    - e. Particular elements of contract performance for which compensation is being requested including:
      - 1) Pay items that have been or may be affected by the change, condition, or event.
      - 2) Labor or materials that will be added, deleted, or wasted by the change, condition, or event, and equipment that will be idled or added.
      - 3) Existing or anticipated delays and disruptions in contract performance, procedure, or order.
      - 4) Estimate of the time within which the Department must respond to the notice to reduce project cost, delay, or disruption.
  - 2. Failure to provide written notification within seven calendar days of when the change, condition, or event is noticed will limit any contract adjustment, when warranted, to those costs or impacts incurred after written notification is received by the Engineer.
  - 3. Failure to provide required notice under this article constitutes a waiver for any claim resulting from the alleged change, condition, or event.
- C. After notifying the Engineer, continue the work unaffected by the alleged differing site conditions, change, condition, or event, to the extent possible under the contract.
- 1. The Engineer will provide a written response within seven calendar days of receiving the notice to do one of the following:
    - a. Confirm the change, condition, or event and, when necessary, direct how the work will proceed.
    - b. Deny the change, condition, or event, and direct how the work will proceed.
    - c. Advise that there is not enough information to decide whether to confirm or deny the change, condition, or event and indicate what additional information is necessary for further review and the date by when it must be received. The Engineer responds to additional information within seven calendar days of receipt.
      - 1) Any contract adjustments will exclude increased costs or time extensions resulting from the Contractor's failure to provide the requested information.
- D. Contract adjustment is made as written modification to the contract through change order when warranted, unless the Contractor does not notify the Engineer in accordance with this article.
- 1. Loss of anticipated profits are excluded.

- E. No contract adjustment that benefits the Contractor is allowed unless the Contractor has provided written notice in accordance with this article.
- F. If the Engineer decides a contract adjustment identified by the Contractor is unnecessary and the Contractor does not agree with the Engineer's decision, the Contractor may pursue a claim for additional compensation or contract adjustment as specified in Section 00727.

## **1.6 VARIATION IN QUANTITIES AND SIGNIFICANT CHANGE IN CHARACTER OF WORK**

- A. The Engineer reserves the right at any time during the work to revise the contract and make written changes in quantities and alterations in the work that are necessary to satisfactorily complete the project.
  - 1. Such changes in quantities and alterations do not invalidate the contract or release the surety and the Contractor agrees to complete the work as altered.
  - 2. Do not proceed with the revised work without the Engineer's written authorization.
  - 3. Upon receiving written approval, proceed immediately with the revised work.
- B. Meet notification requirements under this section, article 1.5, when requesting compensation or adjustment to the contract under this article.
  - 1. No contract adjustment that benefits the Contractor is allowed unless the Contractor has provided written notice in accordance with this section.
- C. Payment will be made at contract prices when the total quantity of any item of work varies from the bid quantity by 25 percent or less.
- D. Payment will be made at the contract prices when the total quantity of any item of work varies from the bid quantity by more than 25 percent and the alterations or changes in quantities do not represent a significant change in character of work to be performed under the contract.
- E. The term "significant change in character of work" applies only to the following circumstances:
  - 1. The character of the altered work differs materially in kind or nature from that involved or included in the original contract.
  - 2. The total quantity of a major contract item, as defined by Section 00570, varies from the original contract quantity by more than 25 percent.
    - a. An adjustment in price may be made to the contract at the request of either party.
    - b. Any price adjustment for an increase in quantity applies only to that portion in excess of 125 percent of the original contract quantity.

- 1) When the original contract price includes fixed costs, such costs are deemed recovered by payment made for 125 percent of the contract quantity and excluded from any adjustment to that portion in excess of 125 percent of the original contract quantity.
  - c. Any adjustment for a decrease in quantity below 75 percent of the contract quantity is limited to the actual quantity of work performed.
    - 1) When the original contract price includes fixed costs, such costs may be considered when establishing the adjustment.
    - 2) Payment for the work will in no case exceed the payment that would have been made for the performance of 75 percent of the original item quantity at the contract price.
- F. The Department adjusts the contract, excluding loss of anticipated profits, if the alterations or changes in quantities result in a significant change in character of work under the contract.
  1. Such alterations or changes can be significant changes to the character of work or by their effect cause other work to become significantly different in character.
  2. Agree upon the basis for contract adjustment before beginning work.
    - a. The Engineer may order the work to proceed under the force account provisions of Section 01282 if a basis for adjustment cannot be agreed upon.
  3. Contract time is adjusted in accordance with Section 00555 for directed changes that require additional time to complete.
  4. Adjustments may be either for or against the Contractor in such an amount the Engineer may determine to be fair and equitable.
- G. If the Engineer decides a contract adjustment identified by the Contractor is unnecessary and the Contractor does not agree with the Engineer's decision, the Contractor may pursue a claim for additional compensation or contract adjustment as specified in Section 00727.

## **1.7 SUSPENSIONS OF WORK ORDERED BY THE ENGINEER**

- A. The Engineer may give written notice to suspend all or any portion of the work for any reason at any time during the contract.
  1. Submit a written request to the Engineer for a contract adjustment for suspensions or delays considered unreasonable or atypical to the construction industry. Refer to Section 00555.
    - a. Submit the request within seven calendar days of the notice to resume work.
    - b. Contract adjustment is made only for requests submitted within the established time frame.

2. The Department does not allow adjustments to the Contract to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other contract term or condition.
  3. Contract adjustment is made in accordance with Sections 00555 and 01282 if both parties agree that the suspension:
    - a. Increased the cost or time required for the performance of the contract.
    - b. Resulted from conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier.
    - c. Was not caused by weather.
- B. If the Engineer decides a contract adjustment due to the suspension of work is unnecessary, and the Contractor does not agree with the Engineer's decision, the Contractor may pursue a claim for additional compensation or contract adjustment as specified in Section 00727.

## **1.8 MAINTAINING TRAFFIC**

- A. Keep roads open to traffic during the work and work suspensions or provide and maintain detour roads as specified or directed.
1. Provide traffic control in accordance with Section 01554.
  2. Maintain all necessary accesses to parking lots, garages, businesses, residences, farms, etc.
  3. Exclude snow removal.
- B. The Department does not additionally compensate for maintenance except for specific work directed by the Engineer to benefit the traveling public.
- C. Suspensions ordered by the Engineer:
1. Prepare the project for traffic flow during anticipated work suspensions.
  2. Maintain all required traffic control devices.
  3. The Department maintains temporary roadways and portions of the project during work suspensions.
  4. Resume maintenance for the entire project once work restarts.
  5. Repair or replace all work or materials lost or damaged during the suspension.
  6. Remove work or materials used for temporary maintenance and complete the project as though the work had been continuous and without interference.
  7. The Department pays for maintenance required for events beyond the Contractor's control during work suspensions at contract prices or as extra work.

- D. Other Suspensions of Work:
  - 1. Maintain the roadway at no additional cost to the Department to accommodate traffic during suspensions resulting from:
    - a. Seasonal or climatic conditions.
    - b. Failure to correct conditions unsafe for the workers or the general public.
    - c. Failure to perform work ordered by the Engineer.
    - d. Other reasons caused by the Contractor.
- E. Failure to maintain traffic is cause for the Department to take action to meet the requirements of this specification.
  - 1. The Department deducts its costs incurred in such actions from money due the Contractor.

## **1.9 USE OF ON-SITE MATERIALS**

- A. Obtain approval before using excavated materials found on the work site that are suitable for completing other bid items of work. The Department pays for the quantity of excavated materials at the contract unit price for roadway excavation and under the pay item for which the material is used.
  - 1. The Department does not charge for the materials used.
  - 2. Obtain written approval before excavating material outside grading limits.
- B. Replace excavated material used for completing other bid items of work with acceptable material at no additional cost to the Department.
- C. Unless otherwise specified in the contract, salvageable material is the property of the Contractor.

## **1.10 FINAL CLEANUP**

- A. Clean all rubbish, excess materials, temporary structures, and equipment from the highway, project, borrow and local material source sites, and all areas occupied in connection with the work before final inspection and acceptance.
  - 1. Refer to Section 01741 for requirements.

## **1.11 RESTORATION OF SURFACES OPENED BY PERMIT**

- A. Allow individuals, firms or corporations with authorized permits to enter the project to construct or reconstruct any utility service.
- B. When directed by the Engineer, repair damage caused by the permit holder. The Department pays for repair work as extra work or as provided in the contract.

## **1.12 RAILWAY - HIGHWAY PROVISIONS**

- A. The Department arranges with the railway for new crossings or for existing crossings used during the work.
- B. The Department does not reimburse for railroad flagging and inspection.
- C. Hold a preconstruction conference at least 15 days before beginning any construction work on railroad right-of-way and give written notice to the Manager of Industry and Public Projects or equivalent position for the railroad company. Coordinate a work schedule based on the actual date both parties can begin work. Refer to project plans for names of railroad companies.
- D. Give at least 48 hours verbal notice to the Manager of Track Maintenance or equivalent position for the railroad company having responsibility for the area the project is in before beginning work once the work dates have been established.
- E. Execute a Contractor's Right of Entry Agreement with the railroad company before performing any work within the railroad right-of-way.
  - 1. Provide all insurance required under the Contractor's Right of Entry Agreement.
  - 2. Provide executed copies of this agreement to the Engineer.
- F. Determine the cost of required railroad flagging, inspection, and cleanup crew. Include these costs in mobilization.
- G. The Department deducts payment under a construction accounting item for "Railroad Flagging, Inspection, and Cleanup," and pays the railroad directly for verified billings. No other compensation to the Contractor for this item is allowed.

## **1.13 CONSTRUCTION OVER OR ADJACENT TO NAVIGABLE WATERS**

- A. Do not interfere with the navigation of waterways when conducting work over, on, or adjacent to navigable waters.
- B. Comply with all conditions of permits from the U.S. Coast Guard or the U.S. Army Corps of Engineers.

## **1.14 CONTRACTOR'S RESPONSIBILITY FOR WORK**

- A. Maintain and protect the work included in the contract against injury or damage from all causes whether or not related to performing the work until project final acceptance.

- B. Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the work under the control of the Contractor at no additional cost to the Department before receiving final acceptance.
- C. Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the work not under the control of the Contractor, under agreed unit prices or as extra work under Section 01282.
  - 1. Items not under the Contractor's control include, but are not limited to, acts of God, acts of public enemies, acts of governmental authorities, fires, floods, unusually severe weather, damage caused by third party errant vehicles, and vandalism.
- D. When work is suspended for any cause:
  - 1. Protect the project from damage.
  - 2. Provide for normal drainage.
  - 3. Erect any necessary temporary structures, signs, or other facilities.
  - 4. Maintain all newly established plantings, seeding, and sodding and protect new tree growth and other designated vegetative growth in an acceptable condition.

#### **1.15 ENVIRONMENTAL PROTECTION**

- A. Refer to Section 01355.

#### **1.16 CONTRACTOR PROPOSALS FOR VALUE ENGINEERING**

- A. The Contractor and the Department equally share the savings resulting from a Value Engineering Change Proposal (VECP) offered by the Contractor and approved by the Department.
- B. The Department considers VECPs that may potentially result in savings and preserve essential functions and characteristics of the facility, including, but not limited to service life, economy of operation, ease of maintenance, desired capacity, and safety.
- C. Base contract bid prices on specified work rather than on VECPs subject to Department approval. Complete the contract as bid if a VECP is rejected.
- D. Submitting Proposals:
  - 1. Submit the following materials and information with each proposal:
    - a. A statement that the submission is a VECP.
    - b. A description of the existing work and the proposed changes for performing the work. Discuss the comparative advantages and disadvantages of each.



- c. A complete set of plans and specifications showing proposed revisions to the original contract.
    - d. A detailed cost estimate for performing the work under the existing contract and under the VECP.
    - e. A time frame within which the Department must make a decision.
    - f. A statement of the probable effect the VECP will have on the contract completion time.
    - g. A description of any previous use or tests of the proposal, conditions, result, dates, project numbers, and the Department's action on the VECP if previously submitted.
  - 2. The Department determines and notifies the Contractor within five working days when there is insufficient review time for a response.
  - 3. The Department may consider a noncompensable delay adjustment to the contract based on the additional review time necessary and its effect on the Contractor's schedule.
  - 4. The Contractor has no claim against the Department for compensable or noncompensable delay if the Department fails to respond within the time indicated in this article when additional information requested from the Contractor is necessary to complete the review.
- E. Requirements:
- 1. VECPs, regardless of their approval by the Department, apply only to the current contract and become property of the Department.
  - 2. The Department only considers VECPs that meet the following conditions:
    - a. Impose no restrictions on use or disclosure.
    - b. The Department may duplicate or disclose any data necessary to use the VECP.
    - c. The Department may apply a proposal for general use on other contracts it administers without obligation to the Contractor.
    - d. This provision does not deny rights provided by law with respect to patented materials or processes.
  - 3. Use only proven features that have been employed under similar conditions or projects acceptable to the Department.
- F. The Department decides whether or not to consider a VECP. The Department may reject a VECP that requires excessive review, evaluation or investigation, or that is inconsistent with project design policies or criteria. The Department rejects VECPs that:
- 1. Provide equivalent options to those already in the contract.
  - 2. Contain revisions the Department is already considering or has approved for the contract.
  - 3. Do not generate sufficient savings.
  - 4. Do not provide additional information as requested by the Department, including requests for field investigation results and surveys, design computations, and field change sheet for proposed design changes.

5. Relate to pavement section thickness or type.
- G. The Contractor has no claim to additional costs or delays, including development costs, loss of anticipated profits, or increased material or labor costs if the VECP is rejected.
- H. The Engineer rejects unsatisfactory work resulting from an approved VECP.
  1. Remove rejected work and reconstruct under the original contract provisions without reimbursement for the work performed under the VECP or for its removal.
  2. Reimbursement for approved modifications to the VECP to adjust to field or other conditions is limited to the total amount payable for the work under the contract bid prices.
  3. Rejection or limitation of reimbursement is not basis for any claim against the Department.
- I. The Department does not consider savings generated by contingency items when it is reduced as part of a VECP unless it can be tied to a reduction in contract time.
- J. The Department pays by change order for VECPs approved in whole or in part. The Department pays as follows:
  1. The contract incorporates changes in quantities of unit bid items or new agreed price items, as appropriate.
  2. The Department pays for the revised work directly. The Department also pays the Contractor 50 percent of the savings between cost of the revised work and the original bid price.
  3. The Department does not reimburse costs to develop, design, and implement the VECP.
  4. Only the Contractor may submit VECPs and be reimbursed for savings. The Contractor may submit VECPs for an approved subcontractor.

**PART 2      PRODUCTS      Not used**

**PART 3      EXECUTION      Not used**

END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 00727**

**CONTROL OF WORK**

**Delete Section 00727 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      RELATED SECTIONS**

- A.      Section 00555: Prosecution and Progress
- B.      Section 00725: Scope of Work
- C.      Section 01282: Payment
- D.      Section 01721: Survey

**1.2      REFERENCES**

- A.      Utah Code Title 63, Chapter 56 – Utah Procurement Code
- B.      Utah Regulations for Legal & Permitted Vehicles

**1.3      AUTHORITY AND DUTIES OF THE ENGINEER**

- A.      The Engineer decides all questions regarding the quantity, quality and acceptability of materials furnished and work performed, work progress, contract interpretation, project final acceptance, and acceptable contract completion.
- B.      The Engineer has the authority to suspend the work, wholly or in part, by written order without liability to the Department if the Contractor does not:
  - 1.      Correct conditions unsafe for the project personnel or the public, or
  - 2.      Perform work properly or comply with contract provisions, or
  - 3.      Comply with the Engineer's orders
- C.      The Engineer can suspend work wholly or partially for:
  - 1.      Periods of unsuitable weather, or

2. Conditions unsuitable for the prosecution of the work, or
3. Any other condition or reason determined to be in the Department's interest

#### **1.4 PLANS AND WORKING DRAWINGS**

- A. Keep at least one complete set of plans, specifications, and standard drawings on the project site at all times.
- B. Furnish to the Department structure plans with working drawings that detail required work not included in the contract plans.
- C. Include the cost of furnishing all working drawings in the related contract bid items.

#### **1.5 CONFORMANCE WITH PLANS AND SPECIFICATIONS**

- A. Perform work and furnish materials to meet contract requirements.
- B. When a contract item does not meet contract requirements but is adequate to serve the design purpose, the Engineer decides the extent to which the work will be accepted and remain in place. The Engineer documents the basis of acceptance and adjusts the contract unit price.
- C. The Department uses the specified pay adjustment factors for payment when the contract provides for acceptance of a contract item not complying fully with the minimum requirements.
- D. Remove, replace, or correct work at no cost to the Department when a contract item does not meet specified requirements and results in work inadequate to serve the design purpose.

#### **1.6 COORDINATING PLANS, STANDARD SPECIFICATIONS, AND SPECIAL PROVISIONS**

- A. All supplementary documents are essential parts of the contract and a requirement occurring in one is binding as though occurring in all. Supplementary documents are complementary and provide and describe the complete contract.

- B. The governing ranking in case of a discrepancy is:

<b>Dimensions</b>	<b>Information</b>
1. Plan	1. Special Provisions
2. Calculated	2. Plans
3. Scaled	3. Supplemental Specifications
	4. Measurement and Payment
	5. Standard Specifications
	6. Standard Drawings

- C. Do not take advantage of any apparent error or omission in the contract.
- D. Notify the Engineer promptly of any omissions or errors in the contract so that necessary corrections and interpretations can be made.

## **1.7 CONTRACTOR COOPERATION**

- A. Facilitate progress of the work and cooperate with Department inspectors and other contractors.
- B. Employ a competent superintendent experienced with the work being performed and capable of reading and understanding the contract documents.
1. The superintendent must have completed the Department's Partnering Training or be registered for and attend the next available training session.
- C. The superintendent must be:
1. Present at the project site at all times that work is being performed.
  2. Authorized to act as an agent for the Contractor and execute instructions and directions from the Engineer or authorized representatives.
- D. Supply all necessary resources to complete the contract regardless of the amount of work sublet.

## **1.8 COOPERATION WITH UTILITIES**

- A. Relocate or adjust utilities when specified.
1. Use work procedures that consider the potential of inaccurate or inexact utility locations provided by utility owners, especially for underground installations.
  2. Cooperate with the utility owners to remove and rearrange underground or overhead utilities to avoid service interruption or duplicate work by the utility owner.
- B. Cooperate with the utility owners to adjust utility fixtures and appurtenances shown in the contract plans.

- C. Use work procedures that protect utilities or appurtenances that remain in place during construction.
- D. The Department notifies utility companies, pipeline owners, or other utility agencies affected by the work to verify that all utility adjustments, within or adjacent to the construction limits, are made as soon as possible.
- E. Notify the appropriate utility authorities of any service interruption resulting from breakage within the construction limits.
  - 1. Cooperate with authorities until service is restored.
  - 2. Work around fire hydrants only after obtaining approval by the local fire authority and then only after making provisions for continued service.
- F. Repair damages to utilities that result from carelessness or omission. Restore damaged facilities to the preexisting condition at no additional cost to the Department.
- G. When directed by Engineer, adjust or relocate utility facilities or appurtenances found but not noted in contract documents.

## **1.9 COOPERATION BETWEEN CONTRACTORS**

- A. The Department reserves the right to contract for and perform other or additional work on or near the work covered by the contract.
- B. Cooperate with other contractors working within the project limits. Conduct work without interrupting or inhibiting the progress or completion of work by other contractors.
- C. Each Contractor involved accepts all liability, financial or otherwise, in connection with the contract.
- D. Each Contractor protects and holds the Department harmless from any damages or claims caused by inconvenience, delay, or loss from the presence and work of other contractors working within the same project limits.
- E. Coordinate and sequence the work with other contractors. Arrange, place, and dispose of materials without interfering with the operations of other contractors on the same project.

## **1.10 DEPARTMENT-PROVIDED CONTROL POINTS AND ELEVATION BENCH MARKS**

- A. The Department provides control points and elevation benchmarks.

- B. Replace disturbed control points and elevation benchmarks at no expense to the Department.

### **1.11 CONSTRUCTION SURVEY**

- A. Perform the Construction Surveying necessary to properly control the entire work. Refer to Section 01721.

### **1.12 DUTIES OF INSPECTOR**

- A. Department inspectors are authorized to inspect all work and materials furnished.
  - 1. Inspection may extend to the preparation, fabrication, or manufacture of the materials to be used.
  - 2. Inspectors are not authorized to alter or waive the contract provisions, issue instructions contrary to the contract, or act as foreman for the Contractor.
  - 3. Inspectors may reject work or materials until any issue in question can be referred to and decided by the Engineer.

### **1.13 INSPECTION OF WORK**

- A. Provide information, assistance, and safe access to the Engineer for all parts of the work to obtain a complete and detailed inspection.
- B. Remove and replace work performed or materials used without inspection by an authorized Department representative at Contractor expense, if ordered by the Engineer.
  - 1. Remove and uncover portions of finished work as directed.
  - 2. Once inspected, restore work to contract requirements.
    - a. The Department pays for the additional cost to uncover, remove, and replace or make good the parts removed as extra work, if the uncovered work is found acceptable.
    - b. The Department does not pay for additional costs to uncover, remove, and replace the covering, or make good the parts removed, if the work is found unacceptable.
- C. If the Engineer fails to reject defective work or materials whether from lack of discovery of such defect or for any other reason, such initial failure to reject in no way prevents the later rejection when such defect is discovered, or obligates the Department to final acceptance.
  - 1. The Department is not responsible for losses suffered due to necessary removals or repairs of such defects.

- D. When a government agency, utility, or railroad company will accept or pay a portion of the contract cost, that organization's representatives may inspect the work. The right to inspect does not make that entity a party to the contract and does not interfere with the rights of parties to the contract.

#### **1.14 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK**

- A. Remove and replace any unacceptable work before final acceptance.
  - 1. Work is considered unacceptable if it does not meet the contract requirements unless accepted under this section, article 1.5.
- B. Work performed contrary to Engineer's instructions, work beyond plan limits, or extra work performed without the Engineer's permission is excluded from pay consideration and may be ordered removed, restored, or replaced at the Contractor's expense.

#### **1.15 LOAD RESTRICTIONS**

- A. Observe legal load restrictions when hauling equipment or materials on public roads beyond project limits.
  - 1. A special permit does not relieve the Contractor of liability for damage.
  - 2. Refer to the "Utah Regulations for Legal & Permitted Vehicles."
- B. Do not apply weight restrictions to equipment or materials hauled over subgrade.
- C. Do not exceed legal gross weight limits on any public roads, structures, or on any component of the pavement structure excluding granular borrow.
- D. Suspend construction operations when load restriction violations are observed until the Engineer approves acceptable corrective measures.
- E. When public roads are used to haul any type of excavation, borrow, backfill, base, or surfacing material, the Engineer contacts the appropriate law enforcement agency if overweight load violations are suspected.
- F. For materials imported to the job site such as asphalt, cement, concrete, steel, etc.:
  - 1. Provide the Engineer with invoices showing the gross load weights.
  - 2. The Department withholds payment for material used in the project if invoices are not provided.
  - 3. The Engineer notifies the appropriate enforcement agency if it is suspected that legal gross load limits are exceeded.



## **1.16 MAINTAINING THE WORK DURING CONSTRUCTION**

- A. Maintain all work included in the contract during construction until final acceptance.
  - 1. Maintain traffic detour routes and project travel ways in accordance with the Traffic Control Plan.
- B. The Engineer immediately notifies the Contractor of failure to meet these provisions.
  - 1. The Engineer maintains the project if unsatisfactory maintenance is not remedied within 24 hours after receiving notice.
  - 2. The Department deducts the entire cost to maintain the work from the money due or to become due the Contractor.
- C. Include in the bid unit prices the cost of maintaining work during construction until final acceptance.

## **1.17 OPENING PROJECT SECTIONS TO TRAFFIC**

- A. The Engineer may order certain sections of work opened to traffic before completion or acceptance of the work.
- B. Opening a section of work does not constitute acceptance of the work or a waiver of any contract provisions.
- C. Maintain any section of roadway opened to traffic by order of the Engineer.
  - 1. When the ordered opening to traffic is not the result of Contractor fault or inactivity, Contractor is paid in accordance with Section 01282.
  - 2. The Department prepares a change order when the opening is not provided for in the contract. The Department does not compensate the Contractor if the order to open is the result of Contractor fault or inactivity.
- D. Engineer gives written notice establishing a time period for completing features of the work for which the Contractor is late.
  - 1. Engineer may order all or a portion of the project opened to traffic if the Contractor does not complete or make a reasonable effort to complete the late work.
  - 2. Assume liability and responsibility for maintaining the work and conduct the remaining construction operation with minimum interference to traffic without additional compensation.

## **1.18 FURNISHING RIGHT-OF-WAY**

- A. The Department secures all necessary right-of-way before construction, except as provided in the contract.

## **1.19 PROJECT ACCEPTANCE**

- A. Partial Acceptance
  - 1. The Contractor may request acceptance of a unit when:
    - a. A unit or portion of the project is substantially complete.
    - b. The unit or portion is considered or determined necessary for the convenience of traffic such as a structure, interchange, roadway section, intersection, substation, or portion of highway lighting or traffic signal systems.
  - 2. The Engineer may make written acceptance of a unit as complete if the unit has been completed according to the contract and relieve the Contractor of further responsibility for that unit.
  - 3. Partial acceptance neither voids nor alters any contract terms.
- B. Substantial Completion
  - 1. Request inspection and verification by the Engineer when the project is substantially complete.
    - a. The Engineer performs an inspection and identifies any necessary corrective work and work necessary for physical completion.
    - b. The Engineer notifies the Contractor in writing and stops contract time when the project is found to be substantially complete.
    - c. Immediately comply with and execute instructions given by the Engineer if the inspection discloses any unsatisfactory work.
    - d. Execute all work necessary for physical completion within 30 calendar days of the substantial completion date in accordance with Section 00555.
- C. Final Acceptance
  - 1. Request inspection and verification by the Engineer when the project is physically complete.
    - a. The Engineer performs the final inspection and identifies any necessary corrective work.
    - b. Immediately comply with and execute instructions given by the Engineer if the inspection discloses any unsatisfactory work.
    - c. The Engineer notifies the Contractor in writing of the date of final acceptance when the project is determined to be physically complete and identifies any documents required to complete the contract.

- d. Furnish all documentation identified by the Engineer to complete the contract within 30 days of notification of final acceptance in accordance with Section 00555.
- e. The Engineer notifies the Contractor in writing of the date of contract completion.

## **1.20 CLAIMS FOR ADDITIONAL COMPENSATION OR CONTRACT ADJUSTMENT**

- A. Notify the Engineer in writing of any intent to file a claim for additional compensation for work or material before beginning or continuing the affected work.
  - 1. Follow the notification requirements for differing site conditions, changes, and requests or claims for additional compensation under Section 00725.
  - 2. The Engineer responds as described for differing site conditions changes, and requests or claims for additional compensation under Section 00725.
- B. Work closely with the Engineer during notification, review, and evaluation to resolve the contract question and avoid further claims.
- C. The Contractor waives any claim for additional compensation if the Engineer is not notified or is not afforded proper facilities for strict accounting of actual costs.
  - 1. Notifying the Engineer and accounting of costs does not substantiate the claim's validity
  - 2. The contract will be adjusted only if the claim is found to have merit.
- D. Submit claim with enough detail to enable the Engineer to understand the basis for entitlement and the resulting costs. Include the following information with each claim submitted:
  - 1. A detailed statement providing all necessary dates, locations, and items of work affected by the claim.
  - 2. The date on which actions or conditions resulting in the claim occurred or became evident.
  - 3. Name, title, and activity of each Department employee knowledgeable about facts that are the basis of the claim.
  - 4. Name, title, and activity of each Contractor employee knowledgeable about facts that are the basis of the claim.
  - 5. The specific contract provisions that support the claim and a statement of why they support it.
  - 6. Identification of pertinent documents, and the substance of any relevant verbal communications relating to the claim.
  - 7. A statement whether the additional compensation or extension of time is based on contract provisions or an asserted breach of contract.
  - 8. For time extension or compensation for delay requests, include:
    - a. The specific days for which a time extension is requested.
    - b. The specific reasons a time extension should be granted.

- c. Documents and reports specified for determining compensation and contract time extension for excusable delays under Section 00555.
- 9. Exact amount and specifics of additional compensation sought and a breakdown of the cost into the following categories:
  - a. Direct labor
  - b. Direct materials
  - c. Direct equipment
    - 1) Do not exceed actual cost on rates claimed for each piece of equipment.
    - 2) In the absence of actual equipment cost, the rates for the equipment, when in use, cannot exceed the force account rates established by Section 01282.
  - d. Field indirect costs
  - e. Home office overhead
  - f. Subcontractor's claims
    - 1) Provide the same level of detail as specified in contract documents for any subcontractor's claims.
- 10. Certification: Submit a statement to the Engineer containing the following language:

Under the penalty of law for perjury or falsification, the undersigned,

_____	_____	_____
Name	Title	Company

hereby certifies that the claim for extra compensation and time, if any, made herein for work on this contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the contract between the parties.

Dated \_\_\_\_\_/s/\_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_

Notary Public \_\_\_\_\_

My Commission Expires \_\_\_\_\_

- E. Failure to either submit information and details as described in this section for any claim, or failure to submit any claim before the date of final acceptance, constitutes a waiver of the claim.

## 1.21 RECORD KEEPING FOR CLAIMS

- A. Maintain complete records of all costs and additional time incurred for any alleged claim.

- B. Permit the Engineer access to those records and any other records as required to determine the facts or contentions involved in the claim.
- C. Retain all records for a period of not less than three years after final acceptance.

## **1.22 AUDITING OF CLAIMS**

- A. All claims filed against the Department are subject to audit at any time following filing the claim.
- B. The Department or an auditor under contract with the Department may conduct the audit. The audit may begin at any time during the life of the contract, or 20 calendar days after notice is provided to the Contractor, the subcontractors, or the Contractor's agents if more than 60 calendar days after the final acceptance date of the contract have elapsed.
- C. Provide adequate facilities acceptable to the Engineer for the audit during normal business hours. Cooperate with the auditors.
- D. Failure of the Contractor, subcontractors, or agents to maintain and retain sufficient records to allow the auditors to verify all or a portion of the claim or to permit the auditor access to the books and records of the Contractor, subcontractors, or agents constitutes a waiver of the claim and bars any recovery.
- E. As a minimum, make the following documents available to auditors:
  - 1. Daily time sheets and supervisor's daily reports
  - 2. Union agreements, if any
  - 3. Insurance, welfare, and benefits records
  - 4. Payroll registers
  - 5. Earnings records
  - 6. Payroll tax forms
  - 7. Material invoices, purchase orders, requisitions, and all material and supply acquisition contracts
  - 8. Material cost distribution work sheet
  - 9. Equipment records including list of company equipment, rates, etc.
  - 10. Vendor rental agreements and subcontractor invoices
  - 11. Subcontractor payment certificates
  - 12. Canceled checks (payroll and vendors)
  - 13. Job cost report
  - 14. Job payroll ledger
  - 15. General ledger, general journal (if used), and all subsidiary ledgers and journals together with all supporting documentation pertaining to entries made in these ledgers and journals
  - 16. Cash disbursements journal
  - 17. Depreciation records on all company equipment used in performance of the work

18. All other documents used to develop costs for the Contractor's internal purposes to establish the actual cost of owning and operating equipment used in performance of the work
  19. All documents related to preparing the Contractor's bid, including final documents on which the bid was based - Exclude documents placed in escrow
  20. All documents that relate to each and every claim together with all documents that support the amount of damages as to each claim
  21. Worksheets used to prepare the claim establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, all documents that establish the time periods, individuals involved, and the hours and rates for the individuals
- F. Full compliance with the provisions of this article is a contractual condition precedent to the right to seek judicial relief.

### **1.23 HIGHER LEVEL REVIEW OF CLAIMS**

- A. Provide written notification to the Engineer within 10 calendar days of the Engineer's denial of a claim requesting a higher-level review, when not accepting the Engineer's denial action.
- B. Failure to submit a request within this 10-day time frame is considered acceptance of the Engineer's denial action.

### **1.24 CLAIMS REVIEW BOARD**

- A. Pursue administrative resolution of any claim with the Engineer or the designee of the Engineer.
- B. If no agreement is reached, at the Contractor's written request to the Engineer, the Director for Construction and Materials schedules a hearing before the Department Claims Review Board when deemed to be in the best interest of both the Contractor and the Department.
  1. The claim may be presented informally, with or without legal counsel.
    - a. Notify the Department at least 10 calendar days before the hearing when using legal counsel.
- C. The Board makes recommendations and outlines their reasoning to the UDOT Deputy Director within 30 calendar days after the claim hearing.
- D. The UDOT Deputy Director makes an offer of settlement within 45 calendar days after the claim hearing.

- E. The decision of the UDOT Deputy Director is administratively final.
- F. The Contractor has the option of rejecting and appealing the Department's decision to the State Procurement Appeals Board in accordance with Utah Code Title 63, Chapter 56 – Utah Procurement Code.

**PART 2      PRODUCTS      Not used**

**PART 3      EXECUTION      Not used**

END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01282**

**PAYMENT**

**Delete Section 01282 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      RELATED SECTIONS**

- A.      Section 00555: Prosecution and Progress
- B.      Section 00570: Definitions
- C.      Section 00725: Scope of Work
- D.      Section 00727: Control of Work
- E.      Section 01284: Prompt Payment (For Federal Aid Projects)

**1.2      REFERENCES**

- A.      *Rental Rate Blue Book for Construction Equipment*
- B.      Wall Street Journal

**1.3      SCOPE OF PAYMENT**

- A.      The Department fully compensates the Contractor as provided in the contract for:
  - 1.      Furnishing all materials, labor, equipment, tools, transportation, and incidentals required for acceptable completion of the work.
- B.      Lump sum or each:
  - 1.      Consider payment as full compensation for all resources and incidentals necessary to complete the work.
- C.      The Department will not pay the Contractor for:
  - 1.      Work that is in excess of that contained in the contract.
  - 2.      Removal and replacement of defective work.
  - 3.      Loss of anticipated profits.



- D. Partial payment or releasing of retainage does not relieve the Contractor of the obligation to correct all defective work or materials.

#### **1.4 ELIMINATED ITEMS**

- A. Accept the Engineer's authority to eliminate contract items found to be unnecessary to complete the work.
- B. Request reimbursement for all costs incurred before notification of elimination.

#### **1.5 VARIATION IN QUANTITIES AND SIGNIFICANT CHANGES IN CHARACTER OF WORK**

- A. When the accepted quantities of work vary from the estimated quantities in the contract, the Department either pays the original contract unit prices for the accepted quantities of work or provides adjustment in accordance with Section 00725.
  - 1. The Department does not allow compensation for any increased expenses, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense and subsequent loss of expected reimbursement or from any other cause.

#### **1.6 DIFFERING SITE CONDITIONS, CHANGES, AND EXTRA WORK**

- A. The Department pays for differing site conditions, changes, and extra work at either unit price or lump sum as stipulated in the order authorizing the work.
- B. The Engineer uses contract unit prices if they are representative of the work to be performed.
  - 1. Unit price work will be reimbursed at the rates established in the contract.
    - a. These rates include compensation for the actual work and associated field indirect costs, home office overheads, profit, and all other costs incidental to the work unless otherwise defined in the contract.
- C. Negotiated lump sum or unit pricing for changes to the contract work will be based on the Contractor's estimate to do the work as validated by the Engineer's review or independent cost estimate.
  - 1. Support the price with a detailed cost estimate. Include the following in the estimate:
    - a. Labor and equipment hours based on agreed upon productivity rates.

- b. Use the actual cost of wages, benefits, burdens, and other labor related expenses for the labor rates applied to the estimated man-hours.
      - 1) Include certified accounting records verifying these costs or make them available upon request of the Engineer.
    - c. Materials will be reimbursed at actual cost as determined by supplier invoices or estimates.
      - 1) Materials produced on site, such as granular borrow or UTBC will be reimbursed according to the labor and equipment rates used to produce such materials.
    - d. Use the actual cost of the equipment to the Contractor for equipment rates applied to the estimated equipment hours.
      - 1) Include certified accounting records verifying these costs or make them available upon request of the Engineer.
  - 2. A markup of 15 percent will be paid on all expenses identified above. This markup compensates the Contractor for home office overheads, profit, and incidental costs.
  - 3. No other expenses will be compensated unless approved by the Engineer.

## 1.7 COMPENSATION FOR EXCUSABLE DELAYS

- A. Document all costs claimed that result directly from a delay caused by the Department. Refer to Section 00555.
  - 1. Use actual records kept in the usual course of business and measure increased ownership expenses according to generally accepted accounting principles.
    - a. Do not use equipment rental rate guides.
  - 2. The Department does not compensate for the following:
    - a. Profit more than provided in accordance with this section
    - b. Loss of profit
    - c. Labor inefficiencies
    - d. Home office overhead exceeding that provided
    - e. Consequential damages, including, but not limited to, loss of bonding capacity, loss of bidding opportunities, and insolvency
    - f. Any indirect costs or expenses
    - g. Attorney's fees, claims preparation expenses, or litigation costs
- B. Compensable costs will be determined as follows:
  - 1. **Direct Costs:** Actual costs of the Contractor's workforce and equipment idled by the delayed activity.
    - a. Provide an accountant's certification of all costs.
  - 2. **Field Indirect Costs:** Actual costs for job-site supervision and field office operating costs, or other costs not directly associated with a particular work activity, for the period of delay.
    - a. Provide an accountant's certification of all costs.

3. **Home Office Overhead:** Unabsorbed home office costs that would have been paid for by the project billings if the work had not been delayed. To be entitled to home office overhead costs, demonstrate the delay-causing event resulted in financial harm.
- No unabsorbed home office overheads will be reimbursed for the first five calendar days of the delay-causing event.
  - Calculate home office overhead cost from the sixth calendar day of the delay-causing event through its end if the project is between 0 and 95 percent complete.
  - Use the following formula to calculate home office overhead costs:

$$E = D [0.05(A)/C]$$

Where:

0.05 = Allowed markup for home office overhead

A = Current contract value

C = Total contract duration in calendar days, including approved time extensions

D = Number of calendar days the critical path of the schedule is delayed due to the delay-causing event minus five.

E = Total reimbursable amount for unabsorbed home office overhead

- No home office overheads will be reimbursed if the delay occurs after the project is 95 percent complete.
- C. The total reimbursable cost for a compensable delay is the sum of the daily agreed to costs for direct costs, field indirect costs, and unabsorbed home office overhead costs as computed in accordance with this article for the duration of the delay. No other costs, including profit, will be reimbursed.

## 1.8 FORCE ACCOUNT

- A. When the Contractor and Engineer are unable to negotiate an agreed upon price for changed or added work, the Engineer may require the Contractor to do such work on a force account basis.
- Costs reimbursed in accordance with this section are considered full and complete compensation for:
    - All field indirect costs, including project management and supervision, field office operating costs, and all field office staff, except for time spent in immediate and direct supervision of the force account work.
    - All home office overhead costs and other indirect costs incurred as a result of the force account work.

2. The Department does not compensate for small tools (costing \$200 or less) or any other costs for which no specific allowance is provided in this section.
- B. Compensation for labor:
1. The Department pays straight time for all hours worked. Overtime must have the prior written approval of the Engineer.
  2. The Department pays for all labor, including direct supervision used in the actual and direct performance of the work at the wage or scale agreed upon in writing before beginning work.
  3. The Department reimburses for actual costs paid to or in behalf of workers, including health and welfare required by collective bargaining agreements or other employment contract generally applicable to the classes of labor employed on the work.
  4. In addition to the above costs, the Department pays to Contractor an amount equal to 60 percent of the sum of the above items to cover the costs of bonds, insurance, taxes, and all other indirect costs, etc.
    - a. Submit wage, payroll, and cost records pertaining to work paid for on a force account basis to the Engineer. This information is open to inspection or audit.
  5. The Department reimburses for actual costs for subsistence and travel allowance.
- C. Compensation for materials:
1. The Department pays for all materials accepted by the Engineer and incorporated in the project at actual cost, including sales taxes and transportation charges plus 15 percent.
    - a. Materials such as saw blades, drill bits, etc., expended in the course of performing the work, excluding equipment, are considered incorporated in the project.
    - b. Include invoices with statements for all materials used. Certify by affidavit the cost of material furnished from Contractor's stocks when no invoice is available.
- D. Compensation for equipment:
1. The Department does not pay for pickup trucks used solely for transportation.
  2. The Department pays for machinery or special equipment, excluding small tools, authorized by the Engineer at an hourly rate obtained from the *Rental Rate Blue Book for Construction Equipment*. These hourly rental rates are determined by the monthly rental rate taken from the above-mentioned publication divided by 176. The total hourly rates have been computed from equipment costs currently in effect and do not include costs for operating personnel.

Obtain this publication through:  
Equipment Watch  
1735 Technology Drive, Suite 410  
San Jose, CA 95110-1313  
Phone: (800) 669-3282  
Fax: (800) 224-3527  
Refer to <http://www.udot.utah.gov/index.php/m=c/tid=719>.

The rates require adjustment by a Regional Factor and a Depreciation Factor with operating and standby rates established as follows:

- a. Operating Rate - For those hours the equipment is actually in use.
  - 1) Includes ownership and operating costs adjusted for Depreciation and Region factors.
- b. Standby Rate - Compensation for equipment required to be at the work site but not operating. This rate is 50 percent of the adjusted ownership and operating costs computed above.
  - 1) The duration of allowable standby time is to be approved in writing by the Engineer with a maximum of eight hours per day or 40 hours in a week.
3. When the "Manufacturer's Rated Capacity" falls between those shown in the "*Rental Rate Blue Book for Construction Equipment*" the Department uses the shown capacity that is closest to the manufacturer's.
4. Agree upon all rates in writing before beginning work.
5. Obtain approval from the Engineer for any equipment rental rates not provided before the start of any force account work.
6. The Department allows "move-in" and "move-out" transportation cost for a piece of equipment not available on the job, if the particular piece of equipment is not moved onto the job under its own power.
  - a. The Department allows hourly operating rate for equipment moved to the site under its own power.
  - b. The Department pays these charges only once for any particular piece of equipment except in unusual circumstances that must be justified in writing and agreed to by the Engineer.
7. When the equipment used is specialized and not available in the Contractor's inventory and is rented or leased from an outside source, the Department adds a 10 percent allowance on the first \$5,000 plus five percent of the balance in excess of \$5,000 for overhead for all rented or leased equipment paid for by invoices.
  - a. Where the rental rate charged exceeds the rate determined by the *Rental Rate Blue Book for Construction Equipment*, submit the rental or lease agreement to the Engineer for approval.
  - b. The Department pays equipment-operating costs at the rate from the *Rental Rate Blue Book for Construction Equipment* for rented or leased equipment for each hour the equipment was actually used.

8. When the required equipment is in the Contractor's available inventory but not on the project site, the equipment may be rented from a local source. The Engineer may approve rental rates for equipment obtained from local sources when such rates are within 10 percent of the *Rental Rate Blue Book for Construction Equipment*. When the equipment is to be used less than a week, "move-in" and "move-out" costs for Contractor owned equipment may be considered when comparing rental costs of equipment obtained from local sources.
  - a. This option is only allowed when the cost of locally rented equipment is less than using Contractor owned equipment including "move-in" and "move-out" charges.
  - b. Such rentals must be supported by a cost analysis indicating the method used was the least expensive.
  - c. The Department reimburses for such equipment based on the *Rental Rate Blue Book for Construction Equipment* if the Contractor elects to rent equipment of a type that is in the Contractor's inventory and the rental costs exceed that allowed by this article.
- E. Subcontracts:
  1. For all force account work performed under an approved subcontract, the Department pays an additional allowance equal to six percent for overhead for the subcontract.
  2. The Engineer reviews each situation to determine that performing the work by subcontract is justified.
- F. Compare cost records daily with the Engineer.
- G. At the Engineer's request, provide an itemized statement of the cost of the force account work detailed as follows:
  1. Name, classification, date, daily hours designating straight time and overtime, total hours, rate, and extension for each laborer and supervisor. Payrolls may be used for some of this information.
  2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
  3. Quantities of materials, prices, and extensions.
  4. Transportation of materials and equipment.
  5. Cost of fringe benefits and subsistence.
  6. Subcontractors.

## **1.9 PROGRESS PAYMENTS**

- A. The Department makes progress payments at least once each month as the work is progressing.

- B. More frequent payments may be made during any period when the Department determines that the value of work performed during the period is sufficient to warrant a payment.
- C. Payments are based on estimates prepared by the Engineer of the value of the work performed and materials in place under the contract and for payment for material on hand in accordance with this section.
- D. The Department does not make any progress payment when the total value of the work done since the last estimate is less than \$1,000.
- E. From the total value of work, the Department deducts and retains five percent until after the entire contract has been completed in an acceptable manner, with the following exceptions:
  - a. On Federal-aid contracts, retention for subcontracted work is paid upon satisfactory completion and acceptance by the Department. Refer to Section 01284 for Federal-aid contracts.
  - b. When no less than 95 percent of the work has been completed, the Engineer may prepare a semi-final estimate with the consent of the Surety from which the Department retains 1.5 percent of the original contract amount. The Department certifies the remainder for payment, less all previous payments.
- F. The Contractor may enter into an addendum agreement providing for payment of retained money into an escrow account, or the Department does so automatically.
  - 1. This money is applied to the purchase of approved securities that are to be held by an escrow agent until satisfactory completion of the construction contract.
  - 2. The value of the securities placed in escrow has a minimum value equal to or greater than the amount that would otherwise be retained.
  - 3. The addendum agreement must be executed concurrently with the execution of the construction contract. Agreement forms are available in the office of the Department's Director for Construction and Materials.
- G. The Department pays the Contractor within 14 calendar days after certification and approval of billings and estimates.
  - 1. Contractor and Engineer agree to a Saturday partial estimate closing date. Succeeding partial estimates close on the same Saturday for each succeeding month.
  - 2. Contractor approves partial estimate before submission.

## **1.10 PAYMENT FOR MATERIAL ON HAND**

- A. When the Contractor presents delivery copies of invoices, the Department may include in the partial payment invoice, advance payments for acceptable nonperishable materials purchased expressly for incorporation in the work when delivered in the vicinity of the project or stored in approved storage place.
  - 1. The Engineer determines the amount to be included in the estimate, but in no case will the amount exceed the value of the materials as shown on the delivery invoice or 75 percent of the in-place price, whichever is less.
  - 2. When the approved storage location is other than the project site, furnish evidence that the stockpiled materials are irrevocably obligated to the project.
  - 3. The Department does not pay when the invoice value of such materials, as determined by the Engineer, amounts to less than \$2,000 or if materials are to be stored less than 30 calendar days, unless otherwise specified.
  - 4. Within 60 calendar days following the date of the estimate invoice on which the stockpile material is to be paid by the Department, furnish to the Engineer certified paid invoices or a certified statement with a copy of the check showing payment.
  - 5. Material will be removed from the next partial estimate as stockpiled materials if proper invoices showing payment to the supplier is not received.
- B. The Department does not make any partial payment on living or perishable materials until incorporated as specified in the contract.
- C. The Department does not pay for materials brought onto the site at the Contractor's election that may be incorporated into the project such as fuels, supplies, metal decking forms, ties, or supplies used to improve efficiency of operations.
- D. Approval of partial payment for stockpiled materials does not constitute final acceptance of such materials for use in completing items of work.
- E. The Department purchases at actual cost and without any percentage allowance for profit, materials delivered to the project in compliance with the contract or left unused due to changes in plans or variation in quantities, if the materials are not practicably returnable for credit.
  - 1. Purchased materials become the property of the Department.
  - 2. Actual costs are based on invoice price plus transportation costs.
- F. Payment is limited to contract quantities unless ordered by the Engineer. Assume responsibility for excess materials delivered to the project or aggregate produced beyond the contract amount without authority from the Engineer.



- G. At the option of the Department, surplus aggregates up to the contract quantities may be purchased provided the material is stockpiled where directed and meets specification requirements when stockpiled.
  - 1. The Department pays for material accepted on an agreed price basis, which price is normally the Contractor's production cost.
  - 2. The Department pays a negotiated price for transporting and stockpiling materials at the directed location.

## **1.11 FINAL PAYMENT**

- A. When the project has been accepted in accordance with Section 00727, the Engineer prepares the final estimate of work performed.
  - 1. The Department processes the estimate for final payment if the Contractor approves the final estimate and does not object to the quantities within 30 calendar days of receiving the final estimate.
  - 2. The Department pays the entire sum due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract after approval of the final estimate by the Contractor.
- B. File with the Department a full, complete, and itemized written statement justifying the adjustment within 30 calendar days after the final estimate is submitted for approval if additional payment is due from the Department.
  - 1. Contractor waives all disputes not itemized.
  - 2. Submission of disputes by the Contractor will not be reason for withholding full payment of the total value of work shown on the Engineer's final estimate.
  - 3. The Department evaluates the dispute.
    - a. The final estimate is revised accordingly under the terms of the contract if it is determined that additional payment is due.
    - b. The estimate as submitted is final if it is determined that no additional payment is due.
- C. All prior partial estimates and payments are subject to correction in the final estimate and payment.
- D. The Department completes and delivers the final estimate to the Contractor within 90 days of contract completion.

## **1.12 FUEL COST ADJUSTMENT**

- A. Fuel cost adjustment is intended to limit the risk to the Contractor from potentially unstable fuel prices that might occur during the contract.
  - 1. This provision is not intended to estimate actual quantities of fuel used in construction operations or compensate for actual price variations experienced by the Contractor.

2. The Department determines adjustments under the provisions of this section and presumes the Contractor has relied on these provisions when determining unit bid prices.
3. The Contractor may invoke this provision at any time during the contract by written notification to the Engineer.
  - a. Adjustments are then made on all prior and future partial estimates.
  - b. When this provision becomes effective, it remains in effect for the duration of the contract.

B. Abbreviations and Terms:

1. Estimate Price for fuel (EPf): The fuel price established for the partial estimate period.
  - a. On the first Monday of each month the Department determines the EPf using the spot price per barrel for West Texas Intermediate (WTI) crude oil posted in the commodities and futures section of the Wall Street Journal. This spot price is averaged with spot prices posted for the previous three Mondays to establish the EPf.
  - b. The EPf remains in effect until the first Monday of the following month and is used for regular partial estimates closed before the first Monday of the following month.
2. Base Price for fuel (BPf): The contract base fuel price, equal to the EPf in effect on the date of the contract bid opening.
3. Fuel Factor (FF): A combined diesel and gasoline usage factor established for purposes of calculating the Fuel Cost Adjustment.
  - a. Table 1 shows the items of work eligible for adjustment.
4. Fuel Cost Adjustment (FCA): The fuel cost adjustment in dollars determined in accordance with this article.

C. Determining FCA:

1. FCA only applies to acceptable work performed on major contract items, as defined in Section 00570, and eligible items in Table 1 with an individual value of more than \$100,000, or as otherwise specified in Table 1, based on original contract quantities.
2. FCA does not apply to work added by change order.
3. FCA may be positive or negative depending on the changes or differences between the BPf and the EPf.
4. For work performed after the expiration of contract time and approved time extensions, the EPf will be limited to the lesser of:
  - a. The EPf for the estimate period when the work was performed.
  - b. The EPf for the last partial estimate period before the expiration of the contract time.

D. FCA formula:

When the EPf is more than 15 percent above the BPf:

$$FCA = \frac{[(EPf - BPf) - 0.05 BPf] Q (FF)}{42}$$

When the EPf is more than 15 percent below the BPf:

$$FCA = \frac{[(EPf - BPf) + 0.05 BPf] Q (FF)}{42}$$

Where:

Q = Quantity of acceptable work performed  
FF = Fuel factor for Q  
42 = Conversion of gallons of fuel per barrel of crude

E. The Department determines the feasibility of proceeding with the remainder of the project and notifies the Contractor in writing if the project is to be terminated if the EPf increases by more than 50 percent from the BPf for an eligible item of work.

**Table 1**  
**Items Eligible for FCA**

<b>Item of Work</b>	<b>Quantity of Work (Q)</b>	<b>Fuel Factor (FF)</b>
Roadway Excavation, Borrow, Granular Borrow, Top Soil	Cubic Yard Ton	0.45 0.25
Underdrain Granular Backfill	Cubic Yard	1.16
Untreated Base Course	Ton Cubic Yard	0.84 1.63
Hot Mix Asphalt	Ton Cubic Yard	3.60 7.00
Open Graded Surface Course	Ton Cubic Yard	3.60 6.80
Stone Matrix Asphalt (SMA)	Ton Cubic Yard	3.60 6.80
Rotomilling Profile Rotomilling In-Place Cold Recycled Asphaltic Base Recycled Surface	Sq Yd-In Sq Yd Sq Yd Sq Yd	0.03
Chip Seal Coat	Square Yard	0.03
Portland Cement Concrete Pavement Lean Concrete Base Course	Sq Yd-In Sq Yd-In	0.214 0.048
Riprap	Cubic Yard	0.57
Bridges exceeding \$500,000 (Includes the following items: Structural Concrete, Piles, Reinforcing Steel, Prestressed Concrete Members, and Structural Steel) 36 inch and larger pipe culvert – combined items exceeding \$200,000	\$	0.038

### **1.13 ASPHALT COST ADJUSTMENT**

- A. Asphalt cost adjustment is intended to limit the risk to the Contractor from potentially unstable asphalt prices that might occur during the contract.
1. This provision is not intended to estimate actual quantities of asphalt used or compensate for actual price variations experienced by the Contractor.
  2. The Department determines adjustments under the provisions of this article and presumes that the Contractor has relied on these provisions for adjustments when determining unit bid prices.

3. The Contractor may invoke this provision at any time during the contract by written notification to the Engineer.
  - a. Adjustments are then made on all future partial estimates.
  - b. When this provision becomes effective, it remains in effect for the duration of the contract.
- B. The Department adjusts the price of asphalt materials for acceptable work performed on bid items that contain asphalt materials.
- C. Abbreviations and Terms:
  1. Estimate Price for asphalt (EPa): The asphalt price established for the partial estimate period.
    - a. On the first Monday of each month the Department determines the EPa using the spot price per barrel for West Texas Sour (WTS) crude oil posted in the commodities and futures section of the Wall Street Journal. This spot price is averaged with spot prices posted for the previous three Mondays to establish the EPa.
    - b. The EPa remains in effect until the first Monday of the following month and is used for regular partial estimates closed before the first Monday of the following month.
  2. Base Price for asphalt (BP<sub>a</sub>): The contract base asphalt price, equal to the EPa in effect on the date of the contract bid opening.
  3. Asphalt Cost Adjustment (ACA): The asphalt cost adjustment in dollars determined in accordance with this article.
- D. Determining ACA:
  1. ACA does not apply to any work performed within 120 calendar days of the contract bid opening date.
  2. ACA does not apply to work added by change order.
  3. ACA may be positive or negative depending on the changes or differences between the BP<sub>a</sub> and the EPa.
  4. For work performed after the expiration of contract time and approved time extensions, the EPa will be limited to the lesser of:
    - a. The EPa for the estimate period when the work was performed.
    - b. The EPa for the last partial estimate period before the expiration of the contract time.

E. ACA Formula:

When the EPa is more than 15 percent above the BPa:

$$ACA = [(EPa - BPa) - 0.05 BPa] (5.6) T$$

When the EPa is more than 15 percent below the BPa:

$$ACA = [(EPa - BPa) + 0.05 BPa] (5.6) T$$

Where:

T = Tons of asphalt used

5.6 = Conversion of barrels of crude oil per ton of asphalt

The Engineer determines T as follows:

1. For PG asphalt binders
  - a. Use the target percentage of asphalt binder in the approved mix design for the quantity of accepted material for:
    - 1) Hot Mix Asphalt (HMA)
    - 2) Stone Matrix Asphalt (SMA)
  - b. Use the quantity of accepted asphalt binder for:
    - 1) Open-Graded Surface Course (OGSC)
2. For Emulsified Asphalts, use the residual asphalt calculated from the quantity of accepted material.
3. For Cutback Asphalts, use the quantity of accepted material.

- F. The Department determines the feasibility of proceeding with the remainder of the project and notifies the Contractor in writing if the project is to be terminated if the EPa increases by more than 50 percent from the BPa for an eligible item of work.

<b>PART 2</b>	<b>PRODUCTS</b>	<b>Not used</b>
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<b>PART 3</b>	<b>EXECUTION</b>	<b>Not used</b>
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END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01284**

**PROMPT PAYMENT**

**Add Section 01284:**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A.      This section applies only to Federal-Aid Contracts.
- B.      Requirements applicable to Contractors, subcontractors, service providers, material suppliers, and all tier subcontractors, service providers, and suppliers.

**1.2      PROGRESS PAYMENTS**

- A.      Include in subcontract, service, or purchase agreement language agreeing to pay promptly as required by this specification.
- B.      Pay subcontractors for satisfactory performance of sublet work, no later than 10 working days after receipt of payment by the Department.
  - 1.      Enter all subcontractor payments into PDBS Subcontractor Payment Screen within 10 days of receipt of payment by the Department. Date entered should reflect actual date payment was sent to subcontractor.
  - 2.      Entry of payments into PDBS will serve as the Prompt Payment Affidavit. Actual date of entry is tied to the date the pay estimate is sent to the Comptroller. If the entry date exceeds 15 days from the Comptroller date the entry will flag red, indicating non-compliance with the Prompt Payment Provision.
- C.      Pay Material Suppliers and Service Suppliers within 30 calendar days after receipt of payment for work that includes materials and or services.

### **1.3 RETAINED MONEY**

- A. Include in subcontract, service, or purchase agreement language agreeing to pay retained money for subcontract, service, or purchase agreement upon satisfactory completion of the work and acceptance by the Department.
- B. For purposes of this Section, a subcontractor's work is considered satisfactorily completed when all work included in the subcontract is complete, in accordance with all requirements of the contract, and documented as required by the recipient. When a recipient has partially accepted a portion of the work, that portion of work performed is considered to be satisfactorily completed.
- C. Require written notification from the subcontractor when all subcontract items are complete.
  - 1. Notify the Engineer in writing within two working days after written notification from the subcontractor.
  - 2. The Engineer schedules and coordinates an inspection for acceptance of the work within three working days.
  - 3. Receive notification from the Department in writing when the work is considered to be satisfactorily complete and accepted. Acceptance of the work includes all requirements of the contract and agreement on pay quantities.
  - 4. Upon acceptance of the work, the Department releases an amount equal to the subcontractor's retainage. Submit to the Engineer a certified statement:
    - a. In the form of an affidavit on letterhead, including the signature of a legally responsible official, and the signature of a legally responsible official for the subcontractor, certifying that the total amount due is the total retention.
- D. Pay retained money owed to the subcontractor for satisfactory completion of the accepted work no later than 30 calendar days after receipt of payment from the Department.
- E. A determination of satisfactory completion and payment of retained money does not relieve any contractual obligation.

### **1.4 DELAY OF PAYMENT**

- A. Delay payment only for cause, with prior written notice to all parties, to include the Department.



- B. Provide subcontractor 10 working days from date of written notification to correct deficiencies.
  - 1. Release payment upon receipt of documentation demonstrating correction of deficiencies within 10 working days.
- C. Engineer may withhold dollar amount of delayed payment from future estimates.
- D. Include in subcontract, service, and purchase agreements, language providing for the use of appropriate alternative dispute resolution mechanisms to resolve time of payment disputes.
- E. Department may hold disputed funds in escrow until the dispute is resolved.

## **1.5 LIQUIDATED DAMAGES**

- A. Upon determination by the Department of failure to make prompt payment the Engineer will provide written notification to the Contractor. Resolve the failure and make prompt payment within three working days.
- B. Failure to resolve prompt payment results in the assessment of \$250 per each working day, per violation, commencing from the date of the written notification until proof of payment is received.
- C. Proof of payment is defined as providing confirmation from the subcontractor that payment has been received.
- D. Department considers the failure to make prompt payment an indication of a lack of financial fitness. The following additional measures may be imposed as necessary:
  - 1. Forfeit the privilege of bidding on Department projects until payment covered by this Section is made.
  - 2. Forfeit the privilege of having a subcontract, supply or purchase agreement approved to perform work or supply materials on Department projects until payment covered by this Section is made.
- E. Department employs other mechanisms, consistent with this Section and applicable state and local law, so payment is fully and promptly made.

## **1.6 CONTRACTOR INCENTIVE ENTITLEMENT**

- A. Two hundred fifty dollars will be paid to Prime Contractor for each subcontractor provided the following criteria is met:
  - 1. Worked on the project.
  - 2. All prompt payment statements submitted to the project office within five working days after payment to subcontractors.

3. Department received no valid complaints regarding prompt payment.
4. Payment within 30 days after project has reached physical completion.

**PART 2      PRODUCTS      Not used**

**PART 3      EXECUTION      Not used**

END SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01561**

**TEMPORARY ENVIRONMENTAL FENCE**

**Delete Section 01561 in its entirety. Refer to Section 01571: Environmental Controls**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01574**

**ENVIRONMENTAL CONTROL SUPERVISOR**

**Delete Section 01574 in its entirety. Refer to Section 01571: Environmental Controls**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02056**

**EMBANKMENT, BORROW, AND BACKFILL**

**Delete Section 02056, 02061, 02324, and 02330 in their entirety and replace with the following: (References in other UDOT Specification Sections have not been updated.)**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A.      Materials and procedures for construction of embankment and backfill.

**1.2      RELATED SECTIONS**

- A.      Section 02231: Site Clearing and Grubbing
- B.      Section 02317: Structural Excavation
- C.      Section 02332: Embankment for Bridge
- D.      Section 02912: Topsoil

**1.3      REFERENCES**

- A.      AASHTO M 145: Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
- B.      AASHTO T 11: Materials Finer than 75  $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing
- C.      AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates
- D.      AASHTO T 99: Moisture-Density Relations of Soils Using a 2.5 kg (5.5-lb) Rammer and a 305 mm (12 in.) Drop
- E.      AASHTO T 180: Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop
- F.      UDOT Minimum Sampling and Testing Requirements

## **1.4 SUBMITTALS**

- A. Before delivering material to the project, submit:
  - 1. Supplier and source of materials
  - 2. Gradation analysis AASHTO T 27 / T 11
  - 3. Soil classification when applicable AASHTO M 145
  - 4. Maximum Dry Density and Optimum Moisture Determination AASHTO T 99 Method D or AASHTO T 180 Method D for A-1 soils.

## **1.5 ACCEPTANCE**

- A. Acceptance of material is in accordance with UDOT Minimum Sampling and Testing Requirements.
- B. Engineer reserves the right to select and test material randomly from any location at the construction site.
- C. Density Requirement: Acceptance is on a lot-by-lot basis when average density is not less than 96 percent of maximum laboratory density, and no single determination is lower than 92 percent. AASHTO T 99 Method D or AASHTO T 180 Method D for A-1 soils.
- D. Remove any material found defective and replace with acceptable material at no additional cost to the Department.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. Provide materials free of contamination from chemical or petroleum products for embankment and backfill placements. Materials may include recycled Portland Cement concrete.

### **2.2 BORROW**

- A. Classifications A-1-a through A-4. Meet AASHTO M 145

### **2.3 GRANULAR BORROW**

- A. Classification A-1-a. Meet AASHTO M 145
- B. Non-plastic, well-graded, 3-inch maximum

## **2.4 GRANULAR BACKFILL BORROW**

- A. Classification A-1-a. Meet AASHTO M 145
- B. Non-plastic, well-graded, 2-inch maximum

## **2.5 FREE DRAINING GRANULAR BACKFILL**

- A. Meet the following gradation:

<b>Table 1</b>	
<b>Free Draining Granular Backfill Gradation</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
1-1/2 inch	100
1 inch	95 to 100
1/2 inch	25 to 60
No. 4	0 to 10

## **2.6 EMBANKMENT FOR BRIDGE**

- A. Refer to Section 02332.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Complete clearing and grubbing and stripping and stockpiling topsoil before placing embankment. Refer to Sections 02231 and 02912.
- B. Excavate and dispose of unsuitable material as directed by the Engineer.

### **3.2 EMBANKMENT PLACEMENT**

- A. Place roadway excavation or borrow in embankment section with the highest quality material in the top portion of the embankment.
- B. Scarify and compact the top 8.0 inches of the surface to at least 90 percent of maximum laboratory density when the embankment height is 6.0 ft or less and the underlying ground consists of loose material.

- C. Break and scarify all underlying road surfaces in so that pieces do not exceed 3 ft<sup>2</sup>.
- D. Maintain drainage.
  - 1. Grade and maintain the roadway to ensure adequate drainage.
  - 2. Maintain pipe culverts and drainage ditches, or provide temporary facilities when interrupting irrigation systems, sewer, underdrainage, etc.
- E. Place an initial layer to act as a working platform over soft, wet ground when approved by the Engineer.
  - 1. Density specifications do not apply to the working platform.
  - 2. Meet density requirements for embankment placed above the working platform.
- F. The Engineer inspects and accepts the working platform or foundation before embankment is placed.
- G. Spread embankment materials uniformly in layers not exceeding 1 ft (uncompacted depth) and compact to an average of 96 percent maximum laboratory density before placing the next layer. Reduce the lift thickness if tests show unsatisfactory density.
- H. Finish subgrade surface within  $\pm 0.1$  ft of line and grade.
- I. Do not use rock or pavement materials over 3 ft in any dimension. Distribute so space exists for placing and compacting embankment material between large rocks or pavement materials.
- J. Do not place large rock within 1 ft of the subgrade surface. Do not allow rocks to protrude above the subgrade surface.
- K. Do not use compacting equipment that causes shear failure in the embankment.

### **3.3 GRANULAR BORROW AND BACKFILL PLACEMENT**

- A. Finish granular borrow surface within  $\pm 0.1$  ft of line and grade.
- B. Structural Backfill Placement (includes bridges, foundation, box culverts, pipe culverts, drains and other structures)
  - 1. Place suitable backfill material in structural backfill sections. Refer to Sections 02317 and 02332.
    - a. Use granular backfill borrow when specified.
  - 2. Use appropriate compaction equipment adjacent to abutments, backwalls, approach slabs, wing walls, retaining walls, and other structures.
  - 3. Compact backfill material in 6-inch layers to a 96 percent density.



- C. Free Draining Granular Backfill
1. Excavate a trench 3 inches below the underdrain pipe flow-line. Widen to 2 ft plus the outside diameter of the underdrain pipe.
  2. Place free draining granular backfill in the trench and compact the bottom 3 inches with two passes of a vibratory roller.
  3. Back fill to 12 inches above top of pipe with free draining granular backfill.
  4. Compact backfill material in 6-inch layers to a 96 percent density when placing under a roadway.

### 3.4 LIMITATIONS

- A. Requirements when working during freezing or snowy conditions:
1. Do not place embankment on frozen or snow-covered areas.
  2. Do not deliver or use frozen material in embankments.
  3. Remove snow and frozen material from embankments, foundations, and borrow areas, and furnish embankment material that can be compacted to the specified density.
  4. Remove, waste, and replace frozen embankment material at no additional cost to the Department.
  5. Measure wasted material and provide quantities to the Engineer.

END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02061**

**SELECT AGGREGATE**

**Delete Section 02061 in its entirety. Refer to Section 02056: Embankment, Borrow, and Backfill**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02324**

**COMPACTION**

**Delete Section 02324 in its entirety. Refer to Section 02056: Embankment, Borrow, and Backfill**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02330**

**EMBANKMENT**

**Delete Section 02330 in its entirety. Refer to Section 02056: Embankment, Borrow, and Backfill**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02844**

**CONCRETE BARRIER**

**Delete Section 02844 and replace with the following:**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A.      Precast concrete barriers: New Jersey shape, full, half, and terminal section.
- B.      Precast constant slope concrete barrier.
- C.      Cast-in-place concrete barriers.

**1.2      RELATED SECTIONS**

- A.      Section 01554: Traffic Control
- B.      Section 02842: Delineators
- C.      Section 03055: Portland Cement Concrete
- D.      Section 03211: Reinforcing Steel and Welded Wire
- E.      Section 03390: Concrete Curing
- F.      Section 03392: Penetrating Concrete Sealer

**1.3      REFERENCES**

- A.      ASTM A 36: Carbon Structural Steel
- B.      ASTM A 325: Standard Specification for Structural Bolts
- C.      ANSI/AASHTO/AWS D1.5
- D.      UDOT Quality Management Plan

## **PART 2      PRODUCTS**

### **2.1      CONCRETE**

- A.      Class AA(AE). Refer to Section 03055.

### **2.2      STRUCTURAL STEEL**

- A.      Connection pins, connection loops, and stabilization pins. Refer to ASTM A 36.
- B.      Connection Threaded Rod. Refer to ASTM A 325

### **2.3      REINFORCING STEEL AND WELDED WIRE FABRIC**

- A.      As specified, refer to Section 03211. Refer to ANSI/AASHTO/AWS D 1.5.

### **2.4      BARRIER SEAL FOR ALL PRECAST CONCRETE BARRIER**

- A.      Polyester polyurethane open-cell foam 100 percent impregnated with asphalt.
- B.      Foam unit weight requirements:
  - 1.      Before impregnation: 68 lbs/yd<sup>3</sup> to 85 lbs/yd<sup>3</sup>.
  - 2.      After impregnation: 252 lbs/yd<sup>3</sup> to 270 lbs/yd<sup>3</sup>.
- C.      Impregnated asphalt foam returns to 95 percent of its original volume when compressed to 25 percent of its volume and released.
- D.      Impregnated asphalt foam remains stable at temperatures ranging from -40 degrees F to +150 degrees F.

### **2.5      CONCRETE BARRIER**

- A.      Use the specified reinforcing steel as per applicable BA Series Standard Drawings, as the reinforcing component. Refer to Section 03211.
- B.      Hot and cold weather limitations. Refer to Section 03055.

## **2.6 PRECAST NEW JERSEY SHAPE SECTION AND CONSTANT SLOPE CONCRETE BARRIER**

- A. Pre-qualify the fabricator as a supplier of precast concrete products in accordance with the Quality Management Plan: Precast-Prestressed Concrete Structures.
- B. Mark each barrier with 1½ inch numbers indicating the date of casting and identification number supplied by the inspector. Impress ¼ inch deep into the top center of the barrier.
- C. Prevent cracking or damage during handling and storage of precast units. Replace cracked or damaged precast units at no additional cost to the Department.
- D. Do not ship until:
  - 1. 28-day compressive strength acquired.
  - 2. Cured and sealed according to Section 03390.
  - 3. Visually inspected and accepted by the Engineer.

## **2.7 BARRIER DELINEATION**

- A. Sheeting: Refer to Section 02842.
- B. Hardware: Refer to GW Series Standard Drawings.

## **2.8 SURFACE SEALING MATERIAL FOR ALL BARRIER TYPES**

- A. Refer to Section 03392.

## **2.9 EXTRUSION AND SLIP FORM MACHINES FOR CAST-IN-PLACE CONSTANT SLOPE BARRIER**

- A. Capable of vertical adjustment to the grade line while in forward motion.
- B. Use equipment with an attached grade line gauge or pointer to make a continual comparison with the barrier being placed and the offset guideline.

## **PART 3      EXECUTION**

### **3.1      PREPARATION**

- A.    Site considerations:
  - 1.    Protect work area when removing traffic barriers and crash cushions until the barriers and crash cushion are reconstructed or the hazard is mitigated. Refer to Section 01554.
  - 2.    Precast Concrete Barrier: Complete grading requirements and place any required paved surfaces as per BA Series Standard Drawings before installing barrier. Complete grading requirements prior to installation of barrier or crash cushions reference CC Series Standard Drawings.
- B.    For cast-in-place constant slope protection:
  - 1.    Before applying curing compound, give the surface a final soft brush finish with strokes parallel to the line of barriers.
  - 2.    Do not finish with a brush application of grout.
  - 3.    Refer to Section 03392.
  - 4.    Complete grading requirements prior to installation of crash cushions reference CC Series Standard Drawings.

### **3.2      PRECAST CONCRETE FULL BARRIER (NEW JERSEY SHAPE) AND CONSTANT SLOPE CONCRETE BARRIER**

- A.    Installation includes moving, stockpiling, and placing all barriers.
- B.    Place seal between each barrier unit so that enough pressure is exerted on the sealing material to form and maintain a permanent bond.
- C.    Conform to BA Series Standard Drawings.
- D.    Tighten X-connection bolt until snug and then add one turn.

### **3.3      CAST-IN-PLACE CONSTANT SLOPE CONCRETE BARRIER**

- A.    Obtain Engineer approval before placing the barrier.
- B.    Conform to BA Series Standard Drawings.
- C.    Fixed forms: Do not use precast mortar blocks to support the reinforcing steel.



- D. Constant slope barrier placed by extrusion or slip form:
  - 1. Provide an offset guideline for the extrusion or slip form machine to maintain the predetermined grade.
  - 2. Feed concrete to the extrusion or slip form machine at a uniform rate.
  - 3. Operate machine, uniformly restraining forward motion.
    - a. Produce well-compacted, dense concrete with consistency that maintains the shape of the barrier without support.
    - b. Produce a well-compacted mass of concrete free from surface pits larger than 1 inch in diameter and requiring no further finishing.
  - 4. Saw or form joints before applying curing compound.
- E. Curing: Refer to Section 03390.
- F. Penetrating Concrete Sealer:
  - 1. Application rate based on resident content at a coverage rate of 0.11 lbs/yd<sup>2</sup>.
  - 2. Apply according to the manufacturer's recommendation for horizontal, vertical, and all surfaces.
  - 3. Select a sealer with maximum drying time of 1½ hours.

### **3.4 DELINEATION HARDWARE**

- A. Concrete Barrier: Attach L Barrier Reflector. Refer to GW Series Standard Drawings.
- B. Attachment Location: Refer to BA Series Standard Drawings.
- C. Application: Refer to GW Series Standard Drawings.

END OF SECTION